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Vol. 47, No. 1 $3.00
March Quarter 1982
Registered by Australia Post Publication No. NBH 0770



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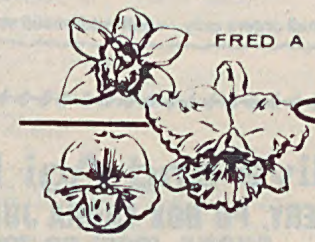
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One of the rarer species not often seen in this country but is a real delight, it is of the Phalaenanthe section and has up to forty-five, 25 mm, pure white blooms on a single spike and is beautifully presented. Its blooming season is in the winter months.

D. AFFINE 'CAIRNS' — SILVER MEDAL 10th WOC, DURBAN x (D. IMPACT 'WHITE' x D. TOMIE 'WHITE')
White round flowers similar to below cross, with the Impact influence could flower any time of the year.

D. AFFINE 'CAIRNS' — SILVER MEDAL 10th WOC, DURBAN x D. DOREEN 'KAMIYA'
Could expect 20-40 much larger, round flowers on the stem, flowering season between autumn and spring.

D. ANN FALLON = (D. HALO x D. TOMIE) x D. FOUR SEASONS
The Ann Fallon used in this crossing was a large, dark mauve variety, with big heads of flowers and is a vigorous grower, crossed on to Four Seasons — should result in round, full-shaped, mauve blooms and be much easier to grow than the straight Phalaenanthe type, this was the main purpose of making the cross.

D. FOUR SEASONS x D. HICKAM DEB 'WALCREST'
Big, round, dark mauve type — D. Four Seasons having D. Impact in its breeding should make this cross more vigorous than the straight Hickam Deb type. If you like the round exhibition show blooms — don't miss this one.

(D. TED TAKIGUCHI x D. DOREEN) x D. DOREEN 'KAMIYA'
D. Ted Takiguchi x D. Doreen is the biggest, good-shaped white I have come across — 95 mm wide — that is half an inch larger than Hickam Deb 'Walcrest', crossed on to the best white from Hawaii, D. Doreen 'Kamiya'. I will let you be the judge how good this cross will be.

D. HICKAM DEB 'WALCREST' x D. LADY CHARM 'BLACKIE'
Although Lady Charm has been in our collection for twenty-two years there still hasn't been anything produced to come up to it for its dark colour and charm and it is known to impact its colour on to its progeny, crossed on to Hickam Deb 'Walcrest' — should produce very dark round, up to 75 mm blooms.

(D. IMPACT 'WHITE' x D. TOMIE 'WHITE') x D. DOREEN
Full shape, large white, with very good substance — should follow the growth pattern of D. Impact and be continuous growers. Its flush flowering should be autumn but this cross could come into flower at any season.

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MS183 **Odontoglossum STAMFORDIENSE x Odontocidium TIGER BUTTER** **$3.00 in 2" pot**
Flowers should be large, probably yellow and brown, some may have some pink suffusion on lips.

RD84 **Brassavola nodosa x Self. Near flowering size** ..... **$14.00 in 2" pot**
A charming easy to grow plant with white flowers - fragrant at night.

35757 **Paphiopedilum VANDA M. PEARMAN. Flowering size** ..... **$15.00 in 2" pot**
A truly beautiful Paph. Flowers flushed pale pink with fine red spots.

A QUARTET OF CATTLEYAS WITH RED POTENTIAL

N833 **Slc. PRISSY RED 'Baja Bonfire' x Blc. GOLDEN DESTINY 'Apricot Ice'.**

N834 **Slc. TEN-E-JEWEL 'Redwood' x Blc. DESTINY 'Nancy'**

N835 **Slc. TEN-E-JEWEL 'Redwood' x Pot. MEM. SEICHI IWASAKI 'Sachiko'**

N836 **Slc. TEN-E-JEWEL 'Sienna Night' HCC/AOS x Pot. RUBYGLOW 'Blushing Peach'.**

The above four crosses are priced at $4.00 each in 2" pots.

STILL AVAILABLE

Our cattleya Mericlone Special as per our colour advertisement of MARCH 1981.

006 **Lc. VELOTOLO CARMEN (Protected Variety). Near flowering** ..... **$25.00 in 4½" pots**
Mauve flowers of exceptional shape, substance and texture.

007 **Lc. MASSILIA 'Hercules'. Near flowering** ..... **$25.00 in 4½" pots**
Top quality reddish purple of good size.

008 **Lc. OCARINA 'Fascination' (protected variety). Near flowering** ..... **$47.50 in 4½" pots**
An outstanding yellow with red lip.

One each of the above three for $90.00 — Save $7.00.

FREIGHT AND ANY DPI INSPECTION CHARGES WILL BE BILLED SEPARATELY. PRICE LISTS WILL BE SENT ON REQUEST.

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NEW RELEASE CATTLEYA SEEDLINGS

STURDY PLANTS IN 2" TUBES ARE $2.50 EACH, FREIGHT EXTRA.

Blc. Bryce Canyon 'Splendiferous' x Blc. Wake Island 'The Queen'.
C. Nigritian 'King of Kings' x Blc. Bryce Canyon 'Splendiferous'.
Lc. Pirate King 'Crimson Glory' x Blc. Bryce Canyon 'Splendiferous'.
Lc. Pirate King 'Crimson Glory' x Blc. McFarlane Bay 'Archibald'.
Lc. Pirate King 'Port Wine' x Lc. Mem. Andres Battle.
Lc. Jose Dias Castro 'Magnifica' x Lc. Drumbeat 'Triumph'.
Bc. Pastoral 'Innocence' x Blc. Lucky Strike 'Virapongse'.
C. Michiko Nakagawa 'Fuji Snow' x C. Princess Bells 'Betty's Bouquet'.
Blc. Jane Helton 'Lines' x Blc. Mem. Helen Brown 'Sweet Afton'.
Blc. Waikiki Gold 'Lea' x Blc. Faye Miyamoto 'Pokai'.

All plants are growing under shade cloth without heating.
Prompt attention to mail orders.

FULL AUTUMN LISTING NOW AVAILABLE FREE.

TOM BURIAN ORCHIDS

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Phone (08) 298 7294 Prior to Visiting

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THE FOLLOWING MERICLONES ARE AVAILABLE FOR IMMEDIATE DELIVERY. PLANTS HAVE 7"-9" LEAF-LENGTH AND REPRESENTS GOOD VALUE.

BURGUNDIAN 'SYDNEY'. *Polychrome. September.* **$10 each.**
BURGUNDIAN 'BEXLEY'. *Pink. September.* **$10 each.**
HIGHLAND MIST 'LALCHERE'. *White. September.* **$10 each.**
HIGHLAND MIST 'BARRITA'. *Pastel green. September.* **$15 each.**
(+C) MINI SPLENDOUR 'EASTER SHOW'. *Red mini. May.* **$12 each.**
(+C) JOYCE DUNCAN 'SUSAN HUGHES'. *Green. August-September.* **$15 each.**
(+C) SLEEPING NYMPH 'SEACOMBE'. *Pastel green. July.* **$15 each.**
(+C) ARALUEN 'FANTASY'. *Pastel green. August-September.* **$12 each.**
(+C) KALANG 'MAYTIME'. *Pink. May.* **$12 each.**
MALLANA 'MEM. CAROLINE HARGRAVES'. *Yellow. August-September.* **$10 each.**
SUSAN HUGHES 'No. 3'. *Pastel green. September.* **$15 each.**

Buy any eight and receive two bonus mericlone plants. Please include your telephone number when ordering.

NEW OVERSEAS RELEASE

EXCLUSIVE RELEASE FROM SANTA BARBARA ORCHID ESTATE
MERICLONES OF THE HIGHLY-AWARDED MINIATURE CYMBIDIUM

CRACKERJACK 'MIDNIGHT MAGIC', AM/AOS, S/CSA, AD/CSA ..... 2" pot $10.00

MERICLONES

PHAL. CARNIVAL 'TAKATSU', AM/AJOS — large, white, heavy spotting ..... 3" pot $14.00
2" pot $10.00
DTPS. KYOTO 'RED GEM', SM/JOGA — 20 bright red flowers per stem ..... 3" pot $12.00
BAPTISTONIA (correctly ONCIDIUM) ECHINATA 'BEE' — sprays, yellow and brown ..... 2" pot $8.00

RARE BRAZILIAN SPECIES

COLM. SACHIKO NAGATA 'NAGATA', BM/JOGA (ODTNA. DEBUTANTE x ONC. ORNITHORHYNCHUM) ..... 2" pot $8.00
WILSONARA (Oda. Red Master x Onc. tigrinum) 'OGAKI' — red petals ..... 2" pot $9.00
ODCDM. AUTUMN GLOW 'LEOPARD' — bright, orange-red spots on lip ..... 2" pot $9.00
LYC. WYLDE COURT — very limited ..... 3" pot $15.00
LYC. HYBRIDA 'FIRST SUN', HCC/AJOS — white stripes and spots, pink ..... 3" pot $20.00
LYC. CAPRICORN 'ISCHARA' — outstanding orange-red ..... 3" pot $20.00

From Everglades Orchids, Belle Glade, Florida, all for Warmth Tolerance.

EMF-20 ALICEARA MAURY ISLAND 'FANTASY', HCC/AOS — Mericlone ..... 2" pot $9.00
EF-239 ASP. EPIDENBROIDES x ODA. SAXON 'LYOTH PREMIER' ..... 2" pot $4.00
EGS-587 CYM. KORINTJI 'GOLDEN SHOWERS' GREEN GLASS No. 1 — greens-creams ..... 2" pot $3.50
EGS-592 CYM. GAINESVILLE 'POLAR TRAIL' x TOM THUMB 'CHIT CHAT' 4N ..... 2" pot $3.50
EGS-593 CYM. GAINESVILLE 'POLAR TRAIL' x DAN CARPENTER ..... 2" pot $3.50
EGS-566 CYM. KORINTJI 'GOLDEN SHOWERS' x CHIEF JOSEPH 'HAWKES BAY' ..... 2" pot $3.50
EF-206 ODA. REMEMBRANCE No. 4 x ONC. MACULATUM 'JEANETTE GARDNER', HCC/AOS ..... 2" pot $4.00
EF-298 ODCDM. BIG MAC 'EVERGLADES', AM/AOS x ONC. CRISPUM 'GRANDIFLORUM' ..... 2" pot $9.00
EF-208 CYM. PETER PIPER 'BITTERSWEET' x PANAMA RED No. 1 — reds ..... 2" pot $3.50

MINIATURE CYMBIDIUMS

1984 CYM. MIMI 'SANDLEWOOD', BC/CSA x VOODOO 'HALLOWEEN', HC/AOS ..... 2" pot $3.50
1876 CYM. PETER PAN 'GREENSLEEVES' MAJOR x EARLYANA 'STARLIGHT' — green-white ..... 2" pot $3.50
1746 CYM. BETHLEHEM 'EARLY TIMES' MAJOR x PETER PAN 'GREENSLEEVES' MAJOR ..... 2" pot $3.50
1941 CYM. ANNESBURY 'WILLOW', B/CSA x PETER PAN 'GREENSLEEVES' ..... 2" pot $3.50
1946 CYM. LEODOGRAN 'WESTMINSTER', B/CSA x EARLYANA 'STARLIGHT' ..... 2" pot $3.50

PHALAENOPSIS ALLIANCE — 2" Pots

1178 PHAL. (Princess Kaiulani x Penang) x STUARTIANA 'LARKIN VALLEY', AM/AOS — red stripes $5.00
1194 PHAL. CARNIVAL QUEEN x STUARTIANA 'LARKIN VALLEY', AM/AOS — crimson spotting $4.00
1202 PHAL. GOLDEN GLAZE x GOLDEN PRIDE 'LARKIN VALLEY' — dark, golden yellows $5.00
1208 (Dpts. James Hall No. 1 x Phal. Moon Probe No. 4) x PHAL. AMBOINENSIS — yellows $5.00
1221 PHAL. PRINCESS SAMBA x TROPIC SUNSET 'RED DEVIL' — brilliant reds $5.00
1228 PHAL. PRINCESS KAIULANI 'YELLOW SUNSET' x GOLDEN DUPLICATE — yellows/greens
1236 PHAL. POLYNESIAN SUNSET x (Kathryn Saltzman x Hugo Freed) — red speckling $4.00
1239 (Phal. amboinensis x Reichentea) x (sturtiana x Francine) — heavy spotting $4.00
1242 PHAL. (Samba x (Princess Kaiulani x ochracea 'Larkin Valley')) x SPICA 'FLORENCE' $4.00
1089 REN. IMSHOOTIANA x PHAL. MATTIE MURCHISON — art shades, waxy ..... 2" pot $4.00
3" pot $8.00
1352 DTPS. MELBA MILLER 'RUBEN', AM/AOS x REN. IMSHOOTIANA — art shades ..... 2" pot $4.00
3" pot $8.00
PHAL. RIO'S MISSY (Barbar Moler x Cathy Owens) — yellow/orange spots ..... 3" pot $8.00

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PLEASE ADD 10¢ ON INTERSTATE CHEQUES — GOVERNMENT TAX.
Air Freight Delivered: 12 seedlings, three plants — minimum freight $13.00 all States.
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Any 6 flasks $85.00 or any 10 flasks $120.00
delivered free in Australia

If less than 6 flasks, calculate at $15 per flask, plus $10 freight. Payment with order please, no substitutes given, we will refund. You may list alternatives in case of sell outs.

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CATTLEYA MERICLONE FLASKS
6 PLANTS EACH

Blc. Alma Kee 'Tipmalee' AM
Blc. Amberglow 'Marion'
Slc. Brandywine 'Orchidglade' AM
Pot. Coral Queen 'Brilliant' AM
Pot. Chens Queen 'Yellow Queen'
Slc. Empress of Mercury 'Gwo Luen'
Pot. Fortune Teller 'Golden Morocco'
Blc. Faye Miyamoto 'Pokai' AM
Blc. Greenwich 'Killarney'
Blc. Helen Brown 'Showpiece' HCC
Blc. Helen Brown 'Sweet Afton' (3 plants)
Blc. Crispin Rosales 'Ruen Yuan' AM
Blc. Lorraine Malworth 'Orlando' AM
Blc. Normans Bay 'Lucille' FCC
Pot. Rainbow Bay 'Formosan Beauty' AM
Lc. Royal Emperor 'Wade' AM
Slc. Tropic Dawn 'Fire Flame' FCC
Slc. Vallezac 'Magic Fire' FCC
Slc. Vagabond 'Fong Yuen'
C. Princess Bells 'Hozu' AM

CYMBIDIUM MERICLONE FLASKS
8 PLANTS EACH

Alice Williams 'Shoalhaven'
Bexley Radiance 'Bexley' AD
Burgundian 'Bexley' HCC
Doreen Darwen 'Miss Amanda' HCC
Doreen Darwen 'Miss Avalon'
Highland Mist 'Lalchere' AM
Highland Mist 'Caroline' AM
Joyce Duncan 'Susan Hughes' AM
Lagoon 'St. Melita'
Levis Duke 'Bella Vista'
Mallana 'Caroline Hargreaves' AM
Sleeping Dream 'Kings Ransom'
Sleeping Dream 'Tetragold' AM
Sensation 'Melita' HCC
Sleeping Lamb 'Golden Tetra'
Sarah Jean 'Wondabah'
Sylvia Miller 'Peachy Keen'
Via Real 'Gail' FCC

OTHER MERICLONE FLASKS
6 PLANTS EACH

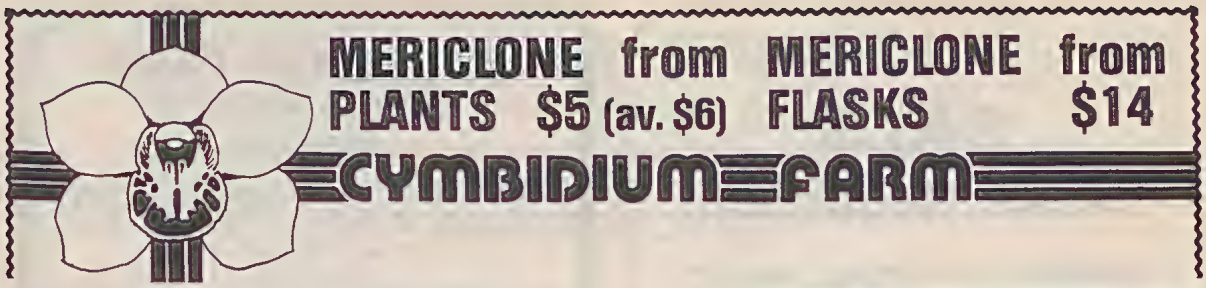
Den. Circe 'Gail' AM
Den. Hickam Deb 'Wallcrest' AM
Den. Fatimah 'Yellow'
Den. Golden Blossom 'Kogane' AM
Ernestara Helga Reuter 'Gold Coin'
Onc. Star Wars 'Palolo'
Onc. Palolo Gold 'Kay'
Asconopsis Irene Dobkin 'York' AM

We have many more mericlones available, produced through our exclusive slow budding process, and also a large selection of seedling crosses. Send 24¢ stamp for our full listing.

SOME OF OUR SEEDLING FLASKS

Den. Margaret Fell x Phal. Bicolor HCC (D. Rakpaibulsombat)
Den. Impact x Phal. Bicolor
Den. Hickam Deb 'Wallcrest' x Kristen Ann
Den. Superstar (Malones AM x Utopia 'Giant')
Lc. Fires of Spring x Slc. Madge Fordyce 'Scarlet Orb'
Lc. Golden Bob x Blc. Golden Galleon 'Del Sol'
Phal. Ebony Lady 'Samba' x lueddemaniana 'Woodlawn'
Phal. Barbara Moler x amboinensis (Sarah Frances Pridgen)
Onc. Papilio x papilio species
(Onc. Kurun-Tigrinum x Raiatean Ballet) x Beverly Allen

New Zealand readers contact,
THE CATTLEYA SELLERS, RD2 WAIUKU, South Auckland.



155 YOUNG STREET, PARKSIDE 5063
(08) 272 6253

MERICLONES AT THE FARM

Cymbidium Farm, the little orchid nursery with the rapidly-increasing turnover, supplies "all that's best" in cymbidium mericlones. The standard plant supplied is a healthy, well-established plant with a leaf-length 20 to 25 cm average (with bigger plants being sent if available). They grow them from flasks well giving them a good start to life and supply them to you well grown and growing well and quickly.

Cymbidium Farm keeps around 200 varieties in stock in quantity plus many more. New additions are made to this list every three months. If you are not on the mailing list then let them know and you will be sent regular listings of all the latest varieties available. The varieties listed and all new additions are carefully selected from the best available clones and are brought to you as quickly as possible.

A high proportion of the varieties listed are exclusive imports that you cannot get elsewhere. They are especially selected, very useful plants – the sort that you will be most pleased to have flower for you, especially when they stand out from all the look-alikes on your local showbench.

There are also, of course, current releases from other nurseries' most recent catalogues – the genuine article – but at a sensible price. As a matter of fact the majority of the varieties on the list come direct from other nurseries in their flasks and are most definitely not repropagations.

The prices for the plants on Cymbidium Farm's list are $5 and $6.50 with some at $8. A discount on all but small orders reduces the price further.

The plants are sent priority air mail for about $2 per 20 plants (or by any other means if required).

There are a number of local agents listed. Some of these stock plants for your inspection and purchase.

FLASKING IS EASY

If you already do, or intend to, buy flasks then you have to get the best – the ones that will not give you any trouble. Cymbidium Farm supplies flasks with tall, sturdy plants, ready to plant out, fresh and vigorously growing, and trouble-free – plants that are likely to grow at a rate that will astound you leaving others behind. Cymbidium Farm flaskers are a happy lot – and why not? They are building excellent collections quickly and cheaply. The word is spreading – but don't wait to be told.

South Pacific Orchids of New Zealand are one of the largest exporters of blooms to the northern hemisphere markets. They have propagated their best production plants. Many of these are also showbench winners or minis.

Cymbidium Farm sells and recommends their flasks. When combined with the Cymbidium Farm flask list there are more than 200 of the best available varieties in flask, including a high proportion of exclusive and connoisseur varieties. The flasks are primarily produced for "own use" and naturally had to be the best plants, best varieties and produced with the best possible flask culture.

The low price per flask is $20 to $26 for 10 plants, or $40 to $52 for 25 plants or $12 to $15 for five plants.

Many are in plastic jars that can be sent for $1 per flask.

BEGINNER (AND FIRST TIME CUSTOMER) SPECIAL

Following the extraordinary success of the Summer Special offer in the December Review here is an even better offer. This time for beginners (and first time customers) only.

With this offer *you* choose *any* plants in the current Cymbidium Farm catalogue (sent free on request) in each of the categories. Alternatively you may ask for Cymbidium Farm's selection of the largest available plants in any category.

Get started with the best! (the best anywhere). What better way could there be?

4 of the best reds	*$19.00*	*(or $5 ea)*
4 of the best yellows	*$19.00*	*(or $5 ea)*
4 of the best greens	*$19.00*	*(or $5 ea)*
4 of the best whites	*$19.00*	*(or $5 ea)*
4 of the best - any other colour	*$19.00*	*(or $5 ea)*
6 of the best miniatures	*$28.50*	*(or $5 ea)*

ANY or ALL of the above (minimum 6 plants) this offer expires June 30, 1982.

No further discount available on this offer. Available only mail or phone order to the above address. (Allow $2.00 for priority air mail).

SOUTH AUSTRALIANS NOTE

Cymbidium Farm nursery is down at Reynella, south of Adelaide, in the midst of those other orchid nurseries. The location is the corner of Byards and Pimpala Roads, Reynella East, a kilometre up the road from that other nursery on Pimpala Road. The nursery is open only on Saturdays from 10 till 4.

Visitors can call in any Saturday and get any plant in stock including mericlone specials and orchid requisites, orchid seedlings and can talk about their orchid problems. There is an excellent variety of carefully-selected seedlings – selected as worthy for growing on by Cymbidium Farm to produce the successful new varieties in the future. Intended for growing on but available for $3.50. There is a limited number of backbulbs for $1 to $5. Beginners are welcome. Potting and deflasking demonstrations given on request. To especially assist growers with small collections the various pots, composts, fertilizers and fungicides and other preparations that Cymbidium Farm uses are available in small one-dollar lots.

Please note that if you cannot get to Reynella plants can be put aside for you or other delivery arrangements can be made.

Cymbidium Farm has hundreds of flowering-size divisions to suit all. Beginners can start a collection with flowering-size divisions for $7 and connoisseurs will find some of the very best divisions available for $30. The majority – well-known varieties – are in-between and believed to be the lowest-priced divisions in Adelaide.

Good, well-maintained, flowering-size plants are bought or traded in on new varieties at fair prices.

SALE

Stock Reduction

COMMUNITY POTS AS PRICED.

All other orchids discounted by 20%
NO lists will be sent out.

If you can't call, advise us what genera you want and we will select for you.

Mostly 50mm pots in stock. Normally $3 ea.
Flowering size species normally $9 ea.

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PRESENTS

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in flask 35—40 seedlings for $18.00 per flask.
All awarded parents.

BLC Golden Embers 'Chris' AM/AOS x (BLC Bernard Lys x LC Lorraine Shirai).
BLC Dinsmore 'Perfection' FCC/AOS x BLC Sylvia Fry 'Supreme' AM/AOC.
BLC Bryce Canyon 'Splendiferous' HCC/AM/AOS x BLC Mem. Crispin Rosales No. 2.
LC Drumbeat 'Triumph' HCC/AM/AOS x BC Sugar Loaf.
BC Pink Debutant 'First Love' HCC/AOS x Mt. Hood 'Colossal'.
(LC Molly Tyler FCC/AOS x Adolf Heckler) x BLC Sylvia Fry.
Phal. Linda Hunter x (Gladys Read x Doreen).
Phal. Karen Ann McFarlane x Ravel.
Phal. (Gladys Read x Doreen) x Schneewittchen 'Schneeball'.

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D. taurinum, Lineale, nindii, discolor, discolor forma broomfieldii, ostrinoglossum (lasianthera), gouldii, johannis, cochlioides, warianum, antennatum, tangerinum (tangerine), williamsianum, laxiflorum, talasea, helix (Pomio brown) and stratiotes
CROSSES, 2" TO FLOWERING SIZE.

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FROM $5 — 12 to 20 cm LEAF LENGTH

OVER 120 TOP-LINE BEAUTIFUL EXPORT QUALITY FLOWERS IN A WIDE RANGE OF BEAUTIFUL COLOURS.

These are the latest showbench varieties. A sampling of orchids available is as follows (for complete list send SAE):

STANDARD CYMBIDIUMS

ANGELICA 'ADVENT' — lovely export yellow, light spotted lip	Plants	$6	available now
AMY STUART ZITA — large, white August bloom	Plants	$6 and flasks	available now
ARROYA BURRO Var. RAQUEL — 5" green bloom-thick barred red lip	Plants	$5	available now
BEXLEY RADIANCE 'BEXLEY' — Early spring, velvety showbench red	Plants	$6 and flasks	available now
BIG CHIEF 'KIRRAWEE' — Lovely July green-red lip-upright spike	Plants	$6	available now
DOREEN DARWEN 'MISS AMANDA' — Showbench September white, great form	Plants	$8	available now
FUSILIER 'MAN OF KENT' — Vigorous dark pink - August perfect export	Plants	$6	available now
FUSILIER 'THOMAS' — Reddish pink August flower	Plants	$6	available now
GWENNETH REID 'GREENSTONE' — Light green October bloom - suffused pink lip	Plants	$5	available now
KHYBER PASS 'ROTUNDA RED' — TOPS -dark pink, August flower	Plants	$5 and flasks	available now
LOS ANGELES 'ELVINA' — Good shape and texture - late pink exhibition	Plants	$8	available now
LUNAGRAD ELANORA 4N — Green, June 6" SUPER flower	Plants	$6	available now
MALANA 'CAROLINE HARGREAVES' — Awarded top produced September yellow	Plants	$8 and flasks	available now
PEARL BALKIS 'CHAILEY' — 4" crystal white August - show bench bloom	Plants	$6 and flasks	available now
PEARL BALKIS 'PINK PERFECTION' — Lovely soft pink spring flower	Plants	$6 and flasks	available now
RUSS MARTIN 'SUSANNE' — Clear August yellow-red barred lip	Plants	$5 and flasks	available now
SAN FRANCISCO 'THE BEAT' — Lovely polychrome show flower	Plants	$6	available now
SAN MIGUEL 'LIMELIGHT' — 5" early June green on upright spike	Plants	$6 and flasks	available now
SENSATION 'AMINYA' — Intense September red	Plants	$8 and flasks	available now
SENSATION 'MELITA' — September red show and stud flower	Plants	$6 and flasks	available now
SLEEPING BEAUTY 'COLOSSUS' 4N — Beautiful white, August bloom, upright spike	Plants	$8 and flasks	available now
SLEEPING DREAM 'TETRA GOLD' — Big vigorous August yellow lip	Plants	$6 and flasks	available now
SUSAN HUGHES 'CASEY' — 5½" Bold creamy September bloom	Plants	$6 and flasks	available now
SLEEPING BEAUTY 'INCA GOLD' — Pure yellow with darker lip	Plants	$6 and flasks	available now
VIA REAL 'ALEXANDER' — Massive light pink 6" bloom-one of best	Plants	$6	available now
WIENA 'CINDY' — Yellow green June/July export flower	Plants	$5 and flasks	available now
WOLLARA 'GOLDEN BALL' — Intense yellow September bloom - red lip	Plants	$6 and flasks	available now

MINIATURE AND NOVELTY CYMBIDIUMS

AMESBURY 'LEVINE' — Green, broad red spotted lip	Plants	$6	available now
AGNES NORTON 'SHOWOFF' — Very good shaped, browny green flower	Plants	$6 and flasks	available now
DAG 'GREEN JEWEL' — Prolific June/July green - bright red lip	Plants	$6 and flasks	available now
DAG 'DANDY' — 40 Deep green September blooms on spike	Plants	$6 and flasks	available now
EIKOH (Japanese) — Lovely July burgundy flower on upright spike	Plants	$10 and flasks	available now
FAIRY WAND 'RUBY WINE' — Dark pink, good shaped August bloom	Plants	$6 and flasks	available now
KENNY 'NATO' — Japanese import - mid season pink flower	Plants	$10 and flasks	available now
KENNY 'WINE COLOUR' — Mid season darker pink flower	Plants	$10 and flasks	available now
MIMI 'LUCIFER' — Brilliant red, late winter -upright spike	Plants	$6 and flasks	available now
MIMI 'SANDALWOOD' — Pinky red, true miniature	Plants	$6 and flasks	available now
MIMI 'SACRAMENTO' — Lovely greenish tan-show and stud flower	Plants	$6	available now
NONNA 'GOLDEN GLADES' — Bright yellow July flower	Plants	$6 and flasks	available now
ORIENTAL LEGEND 'CINNAMON' — 20-25 cinnamon blooms - upright spike	Plants	$6 and flasks	available now
PIPETA 'RED' — Beautiful July red	Plants	$6 and flasks	available now
PELLEAS 'MONTEREY' — Good shape, pinky red July bloom upright spike	Plants	$6 and flasks	available now
SWEETHEART X AURIGA GRACE — July/August yellow-bold barred lip	Plants	$6 and flasks	available now
CAMELARD Z57— Pink flower with red spotted lip	Plants	$6 and flasks	available now
SUMMER CLOUD X GOWEN DALE -Pure white show winner	Plants	$6	available now
SYLVIA MILLER 'GOLDEN ROD' — Great yellow spotted red lip	Plants	$6 and flasks	available now
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Dendrobium speciosum

Mr Ross Berglund describes this wonderful stand of *D. speciosum* in this issue. Such natural scenes are all too rare. Pictured below the outcrop is Lady Boardman.

Photo: Ross Berglund



Dendrobium loddigesii 'Patricia'

No wonder QOS judges gave this magnificent plant a CCC. It had approximately 980 blooms of above-average form. The grower is Mr J. Cash.

Being deciduous culture needs to be strictly in accordance with its annual cycle. Thus skill is necessary to flower a plant as superbly as this one. The species is endemic to China and Hainan Island.

Ira Butler Award

Native Orchid Hybrid of the Year



Dendrobium Gloucester Sands

Mr Laurie Jarvis of Gosford won the coveted Ira Butler Award with this fine plant. Native growers should start grooming their plants now for coming shows and the next Ira Butler Award. See article.

AUSTRALIAN Orchid REVIEW

MARCH, 1982 VOLUME 47 No. 1

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- **Editorial Committee:**
  R. KERR, A. B. PORTER
  G. HANSEN, G. BANKS
- **Please address all Editorial Matters to:**
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Subscriptions cover a full calendar year terminating with the December issue.

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OVERSEAS

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For all subscriptions and advertising please write Elizabeth Lowe, Publication Manager, Australian Orchid Review, 14 McGill Street, Lewisham, NSW, Australia 2049. (Phone 560 6166).

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COVER STORY

The photo was taken by Mr P. K. Searle of Brisbane who considered it was possibly the best Australian effort at the Tenth World Orchid Conference at Durban, South Africa. It was set up by two Townsville amateur growers, Lister and Hilda Arrowsmith. They took with them to Durban a box of flowers from their own garden comprising vandas, ascocendas, and other vandaceous types, and some dendrobiums, including the native species *D. discolor* var. *broomfieldii*.

They achieved two Firsts, two Seconds, and five Third Prizes.

In spite of having to set up at floor level amid a big competing local display this fine effort stood out. The display is a sample of what registrants for the Eighth Australian Orchid Conference can expect to see in Townsville during August, 1983.

DENDROBIUM SPECIOSUM

ROSS BERGLUND

Illustrated on page 18.

Much has been written recently about this orchid, which is known generally as the "rock lily". We have seen pictures of individual plants or flowers spikes, but how many of AOR readers, especially those overseas or who live away from the Eastern Coast of Australia, have ever seen the real beauty of this plant?

The photograph accompanying these notes was taken in September, 1981 during a visit to Australia by Lord and Lady Boardman. For security reasons I will say only that this superb colony is on the South Coast of New South Wales. The rocky outcrop is adjacent to a small creek in the centre of an old dairy farm. The surrounding land is therefore cleared and best described as lightly timbered hilly grazing country. The outcrop faces East or South East and is sheltered somewhat from the full intensity of the summer sun. The plants are mostly out of reach of predators including cattle, wallabies and kangaroos.

Even this photo does not do full justice to the colony as only part of it is displayed here. The outcrop continued on around a curve with orchids covering it for perhaps 50 metres. There were several hundred spikes at their best when we came across this beautiful sight. Lady Boardman (pictured, who is a keen member of the Royal Horticultural Society), agreed with me, that if only we could, somehow, pick it all up, cliff and all, and have a display like this at the Chelsea Flower Show, then our overseas readers of the AOR would have a better appreciation of the beauty of some of our Australian flora.

Environmentalists, and orchid lovers alike, will be pleased to know that although the surrounding land is owned by a mining company, they are assured that this particular site, and sight, is being fiercely protected from any disturbance, and this colony will hopefully live on for many more hundreds of years. It could be endangered only by those who would prefer to see these plants removed to their own gardens — please don't!

65 Minimbah Rd., Northbridge.

RESUSCITATING PLANTS

Townsville District Orchid and Allied Plants Association reports a method of resuscitating plants which have suffered shocks such as dehydration. Mix two tablespoons of sugar and one teaspoon of a balanced fertilizer in a gallon of water. Immerse the plant for at least one hour, but no more than three hours. Then pot the plant in a normal fashion, using a well drained potting medium. The normal water content of the leaves will be restored. Even if the plant is too far gone to recover it may still produce aerials. It works for ferns and bromeliads as well as orchids.

The Ira Butler Award

Illustrated on page 18.

The IRA BUTLER NATIVE ORCHID HYBRID of the YEAR has been awarded to a fine plant of *Dendrobium* Gloucester Sands which was submitted by the Central coast group of the Australasian Native Orchid Society (ANOS).

This orchid was chosen from numerous entries submitted by the State Societies and by ANOS groups throughout Australia.

The judges commented on the high standard of the plants submitted for the award.

The Ira Butler Committee congratulates the owner of the plant, Mr Laurie Jarvis of the Central Coast Group of ANOS.

In 1982 the committee has decided to include the champion native orchid hybrid of the State Societies and the ANOS group's Winter as well as Spring shows in selecting the Ira Butler Champion Native Orchid Hybrid of the Year.

The Champion Native Orchid Hybrid of the respective State Society or ANOS Group show will receive an Ira Butler trophy and from the winners of these will be selected the Ira Butler Native Orchid Hybrid of the Year.

To participate in the award it is essential that the following details be forwarded by the State Society or ANOS group to the chairman of the award committee Mr John Stuart.

1. Three colour transparencies (not prints) of the entry showing.
   a. flowers, front view
   b. flowers, side view
   c. whole plant
2. a. name and address of winner.
   b. name of plant.
3. Size measurements of the individual flower to assist the judges in arriving at a decision.
4. The hybrid need not have been created by the owner.
5. The committee's judging decision is final and no correspondence will be entered into on the decision.
6. All entries should be addressed to the Chairman of the committee: Mr John Stuart, 45 Tryon Rd., Lindfield. 2070.

The Ira Butler Committee consists of:-

Three members of the OS of NSW

Three members of the ANOS

and an independent chairman who is not a member of the other two Societies.

WATERING

"It is difficult to tell anyone when or how often to water orchid plants. Many factors influence the frequency of watering. With fir bark larger particles have more aeration and dry out more rapidly. Plastic pots hold moisture about twice as long as clay pots. Some greenhouses retain more humidity than others and there is a marked difference between those that are humidified and those that are not. Some genera enjoy more water than others . . . . . It is difficult to overwater a plant in coarse bark. As a general rule plants in bark, for at least the first year, should be watered a bit more often. . . . . After it has been in use some time bark retains more moisture".

Dr L. F. Hawkinson in *Your First Orchids*, Oregon OS.

Clonal propagation of *Phalaenopsis* from flower-stalk nodes in anticontaminant-containing media[1]

JERRY A. JOHNSON[2], ROBERT PERERA[3] AND JOSEPH ARDITTI[4]

Abstract. A method is described for the clonal propagation of *Phalaenopsis* from flower-stalk nodes on media which do not require sterilisation.

Several methods are available for the clonal propagation of *Phalaenopsis* from flower-stalk nodes (Anonymous, 1891, 1892; Arditti, 1977; Arditti, Ball and Reisinger, 1977; Intuwong, Kunisaki and Sagawa, 1972; Reisinger, Ball, and Arditti, 1976; Rotor, 1949; Sagawa, 1961; Sagawa and Niimoto, 1960; Scully, 1966; Tse, Smith and Hackett, 1971). All share the common problem of contamination. One reason is the difficulty of decontaminating the nodes without damaging them. To eliminate the need for harsh treatment of tissues and inhibit contamination we have applied methods developed for non-sterile seedling cultures (Thurston, Spencer and Arditti, in press) to the culture of *Phalaenopsis* flower-stalk nodes.

MATERIALS AND METHODS

Plant material: Flower-stalks of *Phalaenopsis* were obtained from Dr Ernst and plants in the UCI orchid collection within 24 hours of use. The stalks were washed and cut into two-node sections with a scalpel (Scientific Products Co, 17111 Red Hill Avenue, Irvine, CA, 92714) or a razor blade (Knox Industrial Supplies, 1600 E. McFadden, Santa Ana, CA, USA) as described previously (Arditti, *et al*, 1977; Reisinger *et al*, 1976). After surface decontamination the two-node sections were washed, separated and inserted into the culture medium.

Surface decontamination: The scale that covers each bud was removed and the two-node sections were washed with a nearly neutral, liquid dish-washing detergent. Washed nodes were immersed in 50 per cent household bleach (50 ml bleach mixed with 50 ml distilled water) for four to six minutes. After that the sections were washed with boiled water and separated with a sterile scalpel (see below).

Decontamination and sterilisation of work surfaces and tools: Work surfaces were washed with soap and water and wiped with rubbing alcohol or 70 per cent ethanol. Scalpels were sterilised by dipping them in rubbing alcohol or 70 per cent ethanol and/or flaming. Sterile boxes or laminar flow hoods were not needed because the experimental media (Table 3) contained anticontaminants. A clean table or laboratory bench in a dust-free area was sufficient. Care was taken to prevent overloading the medium with contaminants.

Culture vessels: Test tubes or Erlenmyer flasks were used. They were sterilised by washing with rubbing alcohol or 70 per cent ethanol and allowed to drain upside down in a clean, dust-free area. Care was taken not to wet the necks of the culture vessels when pouring medium. Therefore the medium was poured through a funnel which was washed like the culture vessels. Sterile cotton balls (which are available at any drug store) were used to stopper the vessels and were covered with aluminium foil.

Culture conditions: Cultures were maintained under 22-25°C (72-77°F) and 18-hour photoperiods at a light intensity of approximately 150 foot-candles produced by a mixture of fluorescent and incandescent lamps.

Medium preparation: The anticontaminants were added to Knop's medium as modified for use with *Phalaenopsis* (Arditti, 1977; Arditti *et al*, 1977; Reisinger *et al*, 1976; see Table 1). For initial experiments, the medium was sterilised by autoclaving. Anticontaminants (Thurston *et al*, in press) were added to the medium while it was still warm and liquid and mixed by swirling. For subsequent tests the medium was prepared as usual and brought to a boil to dissolve the agar. The anticontaminants were added to the warm, liquid medium and mixed thoroughly.

All anticontaminants were obtained in relatively pure form or mixed with inert substances for agricultural use. These preparations were suitable for use in *Phalaenopsis* cultures. However allowances were necessary for the weight of inert additives when calculating the amounts that were added to the medium.

Commercial preparations which include other active substances not mentioned here were not used. Anticontaminants were obtained from a variety of sources, but can be purchased from biochemical supply houses (Tables 1, 2) or retail nurseries.

All non-sterile substances were dissolved in appropriate solvent (Tables 1, 2), mixed together and added to the medium. The total volume of solvent added did not exceed three per cent of

[1]Supported in part by a grant from the American Orchid Society Fund for Research and Education (to JA) and support from the Ceylon Tobacco Company (to RP). We thank the individuals in Table 2 for the gift of chemicals and Dr Robert Ernst for plant material, and reading and commenting on the manuscript.

[2]Undergraduate research student in plant physiology.
[3]Ceylon Tobacco Company, Ltd, PO Box 18, 108 George R. de Silva Mawatha, Colombo 13, Sri Lanka.
[4]Address for reprint requests

Table 1

Knop's medium with anticontaminants as used for the culture of *Phalaenopsis* node sections[a]

Order of addition	Components	Amount per litre of culture medium	Stock solution	Volume of stock solution per litre of culture medium
	Major elements			
1	$Ca(NO_3)_2 : 4H_2O$	0.500 g[b]	no stock, weigh[b]	add directly[b] to culture medium.
2	KNO_3	0.125 g[b]	12.5 g/1 or weigh[b]	10.0 ml or weigh[b]
3	$MgSO_4 : 7H_2O$	0.125 g	12.5 g/1	10.0 ml
4	KH_2PO_4	0.125 g	12.5 g/1	10.0 ml
	Iron			
5	Ferric citrate	10.0 mg	no stock, weigh	add directly to culture medium.
	Minor elements			
6	H_3BO_3 MoO_3 $CuWO_4$ $ZnSO_4 : 7H_2O$	56.0 μg 16.0 μg 40.0 μg 33.1 μg	56.0 mg/1 16.0 mg/1 40.0 mg/1 33.1 mg/1	add all minor elements to the same 1 litre of distilled water. Stir gently until all salts are dissolved; add 1 ml of it to each litre of culture medium.
	Sugar			
7	Sucrose	20.0 g	no stock, weigh	
	Anti-auxin			
8	***trans*-Cinnamic acid**	14.8 mg	14.8 g/100 ml 95% EtOH[c]	0.1 ml
	Amino acid			
9	*l*-Isoleucine	13.2 mg	650 mg/25 ml 95% EtOH[d]	0.5 ml
	Vitamin			
10	Thiamine HCl	0.4 mg	100 mg/100 ml 95% EtOH	0.4 ml
	Cytokinin			
11	Benzylaminopurine	2.0 mg	60 mg/60 ml 95% EtOH	2.0 ml
	Growth factor			
12	Inositol	100.0 mg	no stock, weigh	add directly to culture medium.
	Anticontaminants[e]			
13	Benlate	50.0 mg	no stock, weigh	add to alcohol solution[e].
14	Nystatin	25.0 mg	10.0 mg/1 ml 95% EtOH	2.5 ml[e]
15	Penicillin G	100 mg	20.0 mg/1 ml 95% EtOH	5.0 ml[e]
16	Gentamycin	50.0 mg	50.0 mg/1 ml	1.0 ml[e]
	Solvent			
17	Water, distilled	to 1000 ml[f]	no stock	no stock
	Darkening agent[g]			
18	Graphite	0.2% w/v[f]	no stock, weigh	add directly to medium[f].
	Solidifier			
19	Agar	13.0 g	no stock, weigh	add to boiling medium.

[a] Inorganic components (items 1-6) and graphite (item 18) are available from standard suppliers such as J. T. Baker, Sargent, Merck, Aldrich and Matheson in Los Angeles, CA, and other cities in the USA. Sugar (item 7), preferably from cane, can be kitchen grade. Agar (item 14) can be obtained from Difco Chemicals, Detroit, MI, USA. All others (items 8-17) may be purchased from Nutritional Biochemicals, Cleveland, OH; CalBiochem, La Jolla, CA; Sigma Chemicals, St Louis, MO; and Aldrich, Milwaukee, WS, USA.

[b] Nitrate-containing solutions tend to become contaminated on standing. Stock solutions are, therefore, not advisable; but if prepared, they should be kept frozen or used within a short period of time.

[c] Keep stock solution in a dark bottle covered with foil and refrigerate or freeze.

Notes continued opposite

Table 2
Compounds tested for *Phalaenopsis* flower-stalk node cultures.

Compounds	Solvent	Function[a]	Common uses	Source[g]
Amphotericin B	70% aq ethanol	Fungicide[c, e]	Intravenous antifungal antibiotic and tissue culture	J. S. Lucania, E. R. Squibb and Sons, Inc PO Box 400, Princeton NJ, 08540
Benlate (50% Benomyl)	Water	Fungicide[c, d, e]	Systemic agricultural fungicide	A. J. Thomas, Agrichemicals Du Pont Co, Wilmington Delaware, 19898 D. L. Burgoyne, Du Pont Co 2180 Sand Hill Road Menlo Park, CA 94025
Gentamycin (Garamycin)	Sterile injectable liquid	Bactericide[f]	Animal tissue culture	Walter Protzman and T. S. Schafer, Schering Corp 60 Orange Street, Bloomfield New Jersey, 07003
Nystatin (Mycostatin)	Abs. methanol	Fungicide[b, c, d, e]	Animal tissue culture and human medicine	S. J. Luciana, E. R. Squibb and Sons, Inc PO Box 4000, Princeton New Jersey, 08540
Penicillin G (potassium salt)	70% aq ethanol	Bactericide	Human medicine and animal tissue culture	S. J. Lucania, E. R. Squibb and Sons, Inc PO Box 4000, Princeton New Jersey, 08540
Sodium Omadine	Water	Bactericide and Fungicide[c, e, f]	Industrial	L. R. Faulkner, Olin Corporation PO Box 991, Little Rock Arkansas, 72203
Vancomycin hydrochloride (Vancocin)	70% aq ethanol	Bactericide[f]	Antibiotic in human medicine	R. J. Hosley, Lilly Research Laboratories, Eli Lilly and Company, Indianapolis Indiana, 46206

[a]Each compound may effect one or more groups, but not necessarily all members of a group.

[b]Phycomycetes [c]Fungi Imperfecti [d]Basidiomycetes [e]Ascomycetes

[f]Bacteria (Gram positive and negative).

[g]The sources listed are those which supplied us with pure substances and commercial formulations for experimental purposes. For practical use all substances should be purchased from regular commercial sources, which include retail nurseries for Benlate as well as CalBiocherm, La Jolla, CA, USA and Sigma Chemicals, St Louis, MO, USA for the others.

Footnotes from Table 1 — continued:

[d]Dissolve the 650 mg in a minimal amount of 95% EtOH, add a few drops of KOH if necessary to help put the compound into solution bring up the volume of 25 ml with 95% EtOH.

[e]Please see text and Table 2 for details on sources and preparation of anticontaminant solutions.

[f]To prepare culture medium, add items 1-7, 12 and 18 to approximately 750 ml of water, dissolve and mix well in a blender; then adjust the pH to 5.0-5.5, bring volume up to 1000 ml with distilled water (item 17) and mark volume on outside of container. Bring solution to a gentle boil and add agar (item 18) slowly while stirring. After dissolving agar, bring volume up to mark with boiled distilled water, allow solution to cool to 75°C (167°F), add items 8-11 and 13-16 to the medium, mix well and distribute into alcohol-washed culture vessels.

[g]Graphite should not be replaced by charcoal. One possible source of graphite is J. T. Baker Chemical Co, 222 Red School Lane, Phillipsburg, NJ 08865.

the culture medium. Substances were not dissolved in other than pure solvents.

Dissolving the substances in 70 per cent ethanol was necessary because many are not water soluble and would not dissolve or disperse in the medium without first being dissolved in alcohol. Substances purchased in sterile solutions were introduced directly into the medium with a sterile disposable needle-syringe unit (obtainable from drug stores with a prescription) or mixed with other compounds in alcohol solutions and added together with them.

Commercial preparations (especially those formulated for agricultural use) may form precipitates in alcohol or water since they contain clay or other insoluble substances. These precipitates, even though inert, were distributed evenly in the culture medium. It was necessary and very important to shake or stir precipitate-containing solutions vigorously before adding them to the medium.

Anticontaminant solution: To prepare the anticontaminant solution, 17.5 ml of 95 per cent ethanol were poured into a 25 ml volumetric flask. After that appropriate amounts of the anticontaminants were added to the alcohol. The mixture was shaken vigorously to dissolve and disperse all substances following which the volume was adjusted to 25 ml with distilled water. Appropriate amounts of this solution were then added to the culture medium (Table 1).

Instructions in the packages or on containers were followed to reconstitute or dissolve substances in ampules. Sterile syringes and needles were used to add or withdraw sterile solvents or solutions.

Some of the anticontaminants are light sensitive and decompose in illuminated media. Therefore graphite (0.2 per cent w/v) was added to darken the medium and prevent decomposition. Charcoal was not used for this purpose since it irreversibly absorbs some of the anticontaminants and effectively removes them from the medium. To insure even distribution throughout the medium, the graphite was dispersed with a blender before adjustment of the pH.

Volumetric glassware was used in the preparation of all solutions (one source is Scientific Products Co).

Ethanol solvent: To make half a litre of 70 per cent ethanol, 368 ml of 95 per cent ethanol were placed into a 500 ml volumetric flask or graduated cylinder and the total volume adjusted to 500 ml with distilled water. The mixture was then shaken well and stored. Rubbing alcohol (isopropyl alcohol or ethanol) can be used instead of 70 per cent ethanol.

RESULTS AND DISCUSSION

Contamination rates were lowest on a medium containing 25 ppm Benlate, 100 ppm Penicillin G, and 50 ppm Gentamycin (Table 3, number 1). Therefore it was selected for further testing (Table 3, numbers 4 and 5). Even on this combination some cultures became contaminated, but transfer of the nodes to fresh, anticontaminants containing medium after one month usually eliminated the contaminants in all but very severe infections. In these cases the transfer reduced but did not eliminate the contamination. Low levels of contamination were no hindrance for leaf, root or plantlet development.

It is important to keep in mind that in the presence of anticontaminants the low levels of contamination, if occurring, is not deleterious and there is no need to discard the cultures. This and the low contamination rates (at most 30 per cent) are compensated for by the fact that this procedure does not require sophisticated equipment and is very easy. Furthermore, the survival rate of nodes in two separate experiments (100 per cent and 85 per cent after five and three months, respectively) were higher than those for axenic cultures (Arditti *et al*, 1977; Reisinger *et al*, 1976). Growers who wish to use this procedure may have to make a minor mental adjustment and accept a few slightly contaminated cultures as the price of ease. With care and experience, contamination rates can be reduced to insignificant levels (Table 3).

Of the several combinations tested, one (Table 3, number 1) was clearly superior and we recommend its use in preference to the others (Table 3, numbers 2 and 3). However, it is important to keep in mind that the spectrum of contamination may vary with locale. Therefore should the recommended formulation (Table 3, number 1) fail to control persistent contamination, it may be necessary to test the effects of the other two.

Organisms which may contaminate *Phalaenopsis* flower-stalk node cultures include a wide variety of bacteria and fungi. These occur at random and their identity cannot be predicted. That is why the recommended formulation (Table 3, number 1) contains two relatively broad spectrum fungicides (Benlate and Nystatin) and two bactericides (Penicillin G and Gentamycin).

CONCLUSION

The method presented here does not require a sophisticated laboratory or complex equipment (except for a good balance). Everything necessary for success can be obtained easily from the listed standard sources. The work can easily be carried out in a kitchen using a stove and a clean table.

Table 3
Effect of anticontaminants on *Phalaenopsis* flower-stalk node cultures.

Number	Formulation	Elapsed time (months)	Percent of cultures: Uncontaminated and/or Surviving	Percent of cultures: Contaminated and not Surviving	Leaves only	Roots & Leaves	Remarks
	Control (basal medium)	5	40	60	20	20	Transferred to fresh medium after 1 month.
1	Basal medium plus: Benlate (50 ppm), Nystatin (25 ppm), Penicillin G (100 ppm), Gentamycin (50 ppm)	5	100	0	60	40	Transferred after 1 month.
2	Benlate (50 ppm), Penicillin (100 ppm), Amphotericin B (10 ppm), Sodium Omadine (5 ppm), Vanocymicin (50 ppm)	5	100	0	60	20	Transferred after 1 month.
3	Benlate (50 ppm), Nystatin (50 ppm), Penicillin G (100 ppm), Amphotericin B (10 ppm), Sodium Omadine (5 ppm)	5	60	40	20	40	Transferred after 1 month.
4	Benlate (50 ppm), Nystatin (25 ppm), Penicillin G (100 ppm), Gentamycin (50 ppm)	3	85[a]	30	59	26	Transferred after 1 month.
5	Benlate (50 ppm), Nystatin (25 ppm), Penicillin G (100 ppm), Gentamycin (50 ppm)	1	80	20	0	0	80% have swollen buds after 1 month.
6	Control (basal medium)	1	80	20	0	0	No survivors after 1 month.

[a]In the presence of anticontaminants some nodes may survive despite contamination. In this case half of the contaminated nodes survived and formed plantlets.

Still, it is important to follow instructions carefully and weigh all components exactly. The formulation we are suggesting can prevent contamination if the nodes and medium are clean and not overloaded with contaminants. Therefore, cleanliness is essential.

REFERENCES

Anonymous. 1891. Un moyen de multiplier les orchidees pour l'avenir. L'Orchidophile 11: 335 (probably by A. Godefroy-Lebeuf).

Anonymous. 1892. De la multiplication des orchidees par sectionment. L'Orchidophile 12: 18-20 (probably by A. Godefroy-Lebeuf).

Arditti, J. 1977. Clonal propagation of orchids by means of tissue culture — a manual, pp 254-259. *In* Orchid Biology — Reviews and Perspectives (J. Arditti, ed). Cornell University Press, Ithaca, NY.

Arditti, J., E. A. Ball and D. M. Reisinger. 1977. Culture of flower-stalk buds: a method for vegetative propagation of *Phalaenopsis*. Amer. Orchid Soc Bull. 46: 236-240.

Intuwong, J., T. Kunisaki and Y. Sagawa. 1972. Vegetative propagation of *Phalaenopsis* by flower-stalk cuttings. Na Okika O Hawaii-Hawaii Orchid J. 1: 13-18.

Reisinger, D. M., E. A. Ball and J. Arditti. 1976. Clonal propagation of *Phalaenopsis* by means of flower-stalk node cultures. Orchid Rev 84: 45-52.

Rotor, G. 1949. A method of vegetative propagation of *Phalaenopsis* stem cuttings. Amer Orchid Soc Bull 18: 738-739.

Sagawa, Y. 1961. Vegetative propagation of *Phalaenopsis* stem cuttings. Amer Orchid Soc Bull 30: 808-809.

Sagawa, Y. and D. Niimoto. 1960. Vegetative propagation of *Phalaenopsis*. Florida Orchidist 3: 22.

Scully, R. M. 1966. Stem propagation of *Phalaenopsis*. Amer Orchid Soc Bull 40: 40-52.

Thurston, K. C., S. J. Spencer and J. Arditti. In press. Phytotoxity of fungicides and bactericides in orchid culture media. Amer J. Bot. (Due in the August 1979 issue).

Tse, A. T.-Y., R. J. Smith and W. P. Hackett. 1971. Adventitious shoot formation of Phalaenopsis nodes. Amer Orchid Soc Bull 40: 870-810.

Department of Developmental and Cell Biology, University of California, Irvine, 92664 U.S.A.

Magnificent Singapore Orchid Show

(Mrs)THELMA KEITH

On 6th September last my husband and I left Townsville to fly to Singapore. Our interest in Singapore began in 1978 when we spent a few days there en route to Bangkok to attend the 9th Orchid Conference.

Our objective was the Singapore Orchid Show organised by the Orchid Society of South East Asia. As members of this Society we had earlier advised the secretary of our intention to attend.

The flight in the large Jumbo Jet was very comfortable. We made a stop at Brunei on the north-western coast of Borneo, where a new international airport has been built. The locals turn out in numbers to see each Jumbo arrive (twice weekly, I believe) as this is a new experience for them.

We arrived in Singapore at about 1 am to find OSSEA secretary Dudley Leicester and his wife Rita there to meet us. We were both happy and just a little embarrassed to have them waiting on our late arrival when we knew they had a very heavy programme that week.

As everyone knows, Singapore is an extremely clean tidy city — or should I say island — beautifully organised and a delight to any plant lover.

Greenery and orchids are everywhere to be seen, starting at the new Changi Airport. Here the landscaping of large foliage plants, orchids, and bromeliards, is breathtaking — especially an orchid and bromeliard covered tree situated in the centre of a busy thoroughfare.

There was much activity at the orchid nurseries we visited during the first few days prior to the show. We went along to the setting-up for a little while on Wednesday night, choosing orchids we wished to purchase for our own nursery and making many new friends in the orchid world.

Naturally the show was on a huge scale compared to our Townsville shows, and a lot of trouble was taken with displays. Pots were concealed by such devices as sinking them into beds of marble chips or sawdust.

There were a number of classes for cut orchid blooms to cater for entries from nearby countries. After visiting nurseries earlier I guessed that some plants were just too big to transport and set up.

The Floral Art section was very beautiful and interesting. Encouragement of juniors by having special classes for them in Floral Art was to me a very pleasing idea.

An added attraction was the splendid collection of orchid photographs.

Opening night was well attended. After the presentation of prizes a nice supper was served. The trophies were eyecatching, some of them many years old and of solid silver.

Show venue was at the Turf Club which is very spacious. Two floors were used to stage the show. Plants from local nurseries were in popular demand. These included many in flower.

On Friday night we attended the Show Dinner at a large Chinese restaurant. Many delicious Chinese courses were served, with wine or whatever you wished to drink.

We continued on after the dinner with a few friends to the Hyatt Hotel, where we enjoyed good company, good music, and entertainment until 2am. We left after promising to visit our new-found friends during visits to their respective countries over the next two weeks.

We left the following morning to visit Penang, Bangkok, Hong Kong, Taipei in Taiwan, and Manila.

The greatest thrill to us was the inclusion of my husband in the Judging Panel of the Singapore Show. His name was included in the programme magazine on the judge's page under the heading of Australia. He had the privilege to be in the judging panel led by Mrs Sagarik. All the judges were presented with a pen in a case for their services. It was truly an honour.

We enjoyed all the places we visited, made new business acquaintances, and bought choice plants for our nursery. My wish on leaving the Philippines was to be able to dash back in February to attend the South East Asian Orchid Conference, but alas there have been too many commitments at home.

My intention in writing this light account of the Singapore visit is to encourage other orchid enthusiasts to attend these events. Believe me all Australians are very welcome.

It was truly a marvellous experience and we are looking forward to being able to attend other orchid happenings in our neighbour countries.

We hope you also will be able to attend with us.

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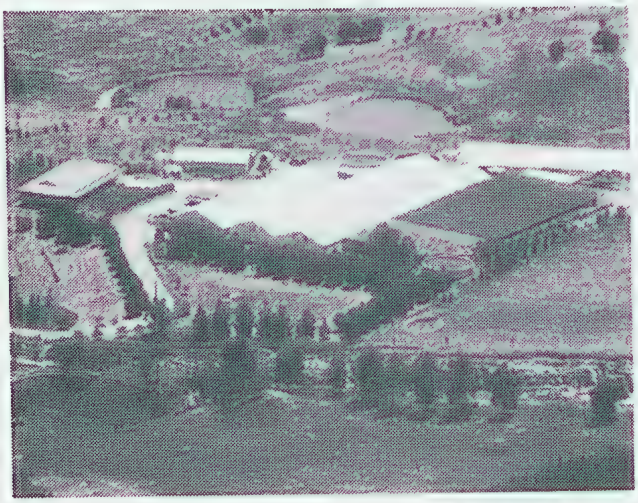
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Cymbidium growth tests at McBeans Aust

RUSSELL MARTIN

Abridged from articles in the VOC Bulletin by kind permission of Mr Martin.

Editor's foreword. Last October I was privileged to inspect the extensive McBeans Orchids (Australia) Pty. Ltd. cymbidium growing houses on the Mornington Peninsula. Thousands of plants were growing extremely well. Mr Martin explained that growing experiments over a three year period which ended in 1972 had saved much work yet increased flower yield. Mr Martin supplied full details of these trials to the *VOC Bulletin* as a series. He stresses that his results might not suit other growers and that some fertilizers might be used in more effective ways by others *under their conditions.* Every grower needs to establish what is best for himself.

This abridgement summarises the technique used by Mr Martin and his results. It is a lesson in thoughtful growing from which much may be learnt.

A feature of these experiments was the relatively large sample of fifty plants for each section.

There is an optimum for each factor of orchid growing and the only way to find this optimum is by controlled experiment. Another important aspect of experimenting was to discover a growing method which involved the least amount of work.

In August 1969, we set about assembling all the necessary plants and materials. As the grower of the plants I was responsible for the light air and water, and also to control any pest or bacterial problems which might arise during the three years of testing. The tabulating and recording of progress was in the hands of Peter Simpson, a Monash Science degree graduate. Records were kept every Saturday morning over three years. They showed leaf, root, and bulb progress from the small plants right through to flowering, also leaf length and substance, and root development with emphasis on mycorrhizal association.

Also covered was the condition of the mixture and its breakdown due to fertilizer action, and whether the fertilizers had any effect on the pH of the mix. We decided on the fertilizers to be used and how they were to be applied.

A glasshouse bench was washed down with bleaching powder, also surrounding walls, floors, and under-surfaces. A strong growing mericlone was selected as the right subject and fifty plants set aside for each section. Soft black plastic pots were used starting with 10cm size.

Our standard cymbidium mix was used, made up as follows:-

3 parts pine bark, 25mm to dust, from Mt Gambier.
1 part rice hulls
1 part peanut shells
1 part bracken or treefern leaf
3 parts very coarse washed sand

These ingredients arrived fresh and were used right away. The sand, although washed when it arrived, was further washed to remove all clay particles and any mineral or other impurity which might affect plant growth. The whole mix was then moistened and turned several times before use. This mix is still our standard mix today, and it tests 4.5 to 5 on the pH scale. It has proved ideal for cymbidium growing, being well drained and capable of being watered daily.

The first fifty mericlones were potted into 10cm pots in this mixture, placed on the prepared bench and marked "control batch". This batch received no feeding but were repotted at the same time as the rest of the plants.

The second group of fifty plants were likewise potted and benched with a division between the two groups. They were fed on Aquasol at half the recommended strength.

A third group was potted in the mix to which had been added a teaspoon of Magamp per 20cm pot. After potting in 10cm pots they were placed on the bench with a partition dividing them from group two.

The same procedure was repeated with Trygon Field Pack Fertilizer, Fish Emulsion, Osmacote, John Innes Base Fertilizer, 4 Seasons Fertilizer, and the last group received a bit of every fertilizer.

The nine batches of fifty mericlones were very even in growth with uniform root systems. The divisions between each ensured that a carryover of fertilizer from one batch to another could not occur.

The control batch received water only throughout the duration of the experiment.

In this open and well drained mix the plants were thoroughly watered. It takes several good waterings to achieve this. Wetness was ascertained by knocking several out of their pots and making sure water had penetrated right to the base. Then the liquid feeding programme began.

Plants were first watered with tap water, which according to the local water authority had only two parts per million of impurities and a pH of about 6.5. The first three fertilizers mentioned, being liquid fertilizers, were all mixed at half the recommended strength and applied every Saturday morning, after growth measurements were

taken, using a watering can with a fine rose. All leaves were covered and the excess ran into the pots.

The solid fertilizers were activated each time water passed by them. All plants were watered daily making sure all foliage was wetted. This regular watering is essential as orchid roots can only take up the plant food in solution. Any excess water will quickly drain off through the mix, leaving it moist but never wet.

About half an hour after watering several of the test plants were removed from their pots and the mix inspected to see that it was moist right through.

A special reason for keeping the plants moist was that we were experimenting with slow release fertilizers. Literature from the maker of Magamp pointed out that it was an almost insoluble chemical compound which released a small amount of plant food every time water passed by each granule. With daily watering the roots had a constant, low level of plant food available at all times. Each of the other slow release fertilizers work in a similar fashion. If the mix used is open and well drained no harm will be done to the plant by this regular watering.

The plants which received liquid feeding also benefited by the fact that regular waterings between their weekly feedings helped to wash out the unwanted salts. Overhead waterings help to keep the foliage clean, free of dust, and the stomata (or pores) clear. Besides this the moisture makes it difficult for red spider or other mites to establish a colony.

Light was also very important. As they were growing under fibreglass the light intensity was adjusted by using glasshouse paint from October to February. This paint either weathers or is easily removed during the winter months.

Air movement is also very important for good plant growth and many problems can arise if plants are grown in still air within a glasshouse. Therefore the trial plants were grown in a fibreglass covered house fitted with two aerovator type fans running constantly.

On the first Saturday morning the task of recording all forms of progress began. Plants one to five in each group were handled on the first inspection, six to ten on the second, so that all fifty in each group were checked in a ten week cycle.

Leaf colour was matched with a R.H.S. colour chart and recorded. The number of leaves per growth recorded, then the length and width. Leaf tips were inspected for any form of discoloration or cell damage, usually the forerunner of die back, black tip, or what is commonly called Edwiania. The entire group of fifty plants was then compared with the control batch of fifty plants which had received water only.

The second set of records covered root development. Each pot from one to five was turned upside down and removed to expose the roots. A record was made of the number of roots, with new tips visible. Also the length of each root tip, the width of the root, the colour, the direction in which it was moving, and if the number of new roots was constant or erratic.

The third set covered the pH of the compost in each group and any changes which may have occurred. It was important to find the earliest such changes started to occur.

To apply the weekly liquid fertilizer to each group being grown that way the amount of fertilizer to make up a two gallon bucket at half strength was weighed out and dissolved with a little warm water, then the bucket was filled with cold water. The solution was tested with a pH meter or indicator papers to find its true pH reading. If the reading was more than five on the pH scale a few drops of Phosphoric acid was added until the test reading showed five. This most important point was demonstrated to me many years ago by one of Queensland's best orchid growers. It is surprising what a difference this adjustment makes to plant growth.

Using this adjusted liquid feeding serves to maintain the pH of the mix, even over a long period.

Mycorrhizal fungus testing. At the end of six months we carried out a thorough examination of each trial block of cymbidiums.

A pH test of the mix was made by taking small samples of mix from several plants of each batch and measuring with a dye indicator accurate to 0.1 of a degree. Each test was recorded and the results were very interesting as quite a distinct variation had already appeared.

A root tip sample was taken from each of several plants in each group. These consisted of about 12mm of the tip of a live, active root. Microscopic slides were prepared by cutting very fine slices of root just as you would slice german sausage, and staining these with indicator dyes. These were placed on glass microscope slides with special fixers to make a permanent slide.

Viewed under a magnification of T x 1 500 it was easy to see the mycorrhizal fungus infection between the cells of the roots, and also ascertain the amount of concentration. This activity of fungal growth within the orchid root is very important. The orchid provides necessary food for the fungal growth, and the fungus provides food for the orchid's growth, especially nitrogen requirements.

Each group was checked against the other with most interesting results.

These thorough inspections took place at regular intervals during the three years and the results are summarised later.

Repotting or potting on. After the six month inspection it was found that some of the plants had already filled their 10 cm pots with roots, while others were showing signs of the mixture breaking down. It was decided to repot ten out of each group of fifty plants and pot on a further ten. This widened the project into a further controlled experiment on the pros and cons of "repotting" or "potting on".

Repotting consists of knocking the plant out of the pot, removing all mixture from its roots and washing them in clean water, removing dead and broken roots, and repotting the plant into the next size pot using new mixture. Little or no root damage should be caused to the plant and the growth will not be affected in any way.

Potting on is knocking the plant out of the pot without disturbing the mixture, placing it in the next size pot and surrounding it with new mix. Thus you have an inner block of old mix and an outer ring of new mix.

An interesting observation made during these operations was the type of material adhering to the roots. In each group roots were found adhering to peanut shell and pieces of bark between 5mm and 25mm in size. The root feeding hairs were well and truly fixed to both these materials, indicating they were extracting plant food in liquid form from both these materials.

Also of great interest to me was the extensive amount of fungal activity around these two materials, indicating that the orchids' roots were in direct association with the correct mycorrhizal fungus for beneficial plant growth.

Of all the groups at the six month stage there was less breakdown of mixture and more healthy mycorrhizal fungus activity in the group being fed on Magamp. This seemed unusual as the top part of the plants, the leaves and bulb area, were certainly not the most advanced of the groups at this stage. Again of great interest was the fact that the pH of this mix remained the same as when we started, around 4.5 to 5. Rather on the acid side and certainly much lower than most orchid books or papers recommend. However, remembering some sound advice which I received many years ago from several well experienced English growers, I am sure most orchids grow best at this low pH.

Within a few days of completing the potting on the plants concerned many showed improved appearance on those not handled. Their leaves looked better in colour, they stood erect, elongation of the central leaves could be easily seen each day.

We also checked for pests and diseases. All plants were in excellent health but were given the same preventative treatment as the general stock. Our spraying programme is safe and also very effective, providing it is carried out regularly to **prevent** infection. We spray orchids with a solution of horticultural white oil and horticultural Clensal mixed together.

One part of white oil is dissolved in 20 parts of water. Separately two parts of Clensal is dissolved in 20 parts of water. The two solutions are then mixed together.

All surfaces of the plant are sprayed four times between December and May. Do not spray after buds have emerged.

Fungal and bacterial infections are controlled with natriphene used four times a year, used at the rate of one part in 2,000 parts of water. Benlate, Karathane, or similar fungicides give like results. If infection does show use two sprayings ten to fourteen days apart.

August 1970 marked the end of the first twelve months and one complete cycle of plant growth. Many plants take a full growing cycle to acclimatise to a particular system of feeding and therefore the full effect of some fertilizers would not be seen at this stage. However marked patterns were apparent. These were even more marked at the end of the second twelve months when all plants were repotted into appropriately larger sized pots.

Three-year Summary. In August 1972 the final chapter of our growing experiment began with the completion of three years controlled growth. We learned many things along the way during that three years and our findings were well worth the effort put into this experiment. In fact, looking back now to that period in 1972, I could not have envisaged just how much the results were going to save us in labour costs over the next 10 years.

By making this summary I feel it only fair to point out that the results recorded are those achieved from our growing conditions. These results could have been quite different if any of the elements such as light, air and water were given in different proportions, and they could also vary in different houses. Neither do I intentionally wish to run down one type of fertilizer in favour of another, as it is a well known fact that many growers produce "Blue Ribbon" orchids using different types of fertilizer, providing they intelligently combine the other elements so essential to produce the perfect flower for the show bench.

It must also be remembered that the feeding

program was continued right throughout the three years and not varied in any way due to a seasonal change. Had we varied the feeding program with the change of season, again a variation in results would have occurred. It did point out to us that certain fertilizers, especially the liquid types can be over done and usually at the expense of good growth.

Finally while reading this report, bear in mind our original aim, that was to produce the best possible growth using a method which involved the least amount of labour, and of utmost importance, producing the greatest amount of flowers.

Now to report fully on each of the groups. Let us begin with Group No. 1, the Control Group:-

Group 1. Water Only. As with previous reports this group of plants clearly demonstrated a lack of feeding. They had made small, three bulb plants which barely filled their 15 cm pots. They all suffered badly from black leaf tip, indicating a mineral deficiency in the mix. The root system was very good but as before thin and brown in colour with very little fungal activity present. The pH of the mix was 5.5 showing a slight drift away from the original 4.5 due to the effects of constant watering, The size of the plants was uniform and none had a made a flowering size bulb, nor were there any flower spikes present.

Group 2. Aquasol. This group were now all in 17.5cm or 20cm pots and had made tremendous progress, each bulb being about twice as big as the previous bulb. The leaves were lush green, very long and semi-pendulous. Most had suffered badly from black tip and there were also many brown or black patches on the leaves, indicative of excessive feeding which leads to cell collapse. The large third bulbs had all made either one or two strong new leads, at the expense of flower spikes. This would indicate that the feeding cycle would have to be broken at one stage during the season to encourage flower spike initiation. The root system was still very poor for the size of the top growth and again mycorrhizal fungus activity was rather poor. The mix was showing signs of breaking down but remained steady at 5.0 on the pH scale. The progress they had made over the control group was amazing, thus showing the need for some type of additional feeding.

Group 3. Trygon Field Pack Fertilizer. There was massive growth which had filled the 20 cm pot with, 3, 4 or 5 bulbs. The leaves were dark blue/green, very long and pendulous but all were peppered with the tiny pin holes right through the leaf. The area around the holes had turned brown showing further cell collapse. Although samples of leaves were tested extensively there were no sign of fungal or bacterial infection. The mystery was later solved by growing these plants on the following years without the use of Trygon and the small holes in the leaves did not appear in any of the new growth. It would be best if Trygon was used only during the growing season, and then only sparingly. The root system was average and the pH of the mix was between 5.5 and 6.0. Although only twelve months old the mix showed signs of breaking down.

Group 4. Fish Emulsion. This group continued to make rapid progress although their leaves were dark green and most definitely on the sappy side. They had now produced 4 or 5 bulbs in the 20 cm pots and the last bulbs were much bigger than the previous bulbs. Again black leaf tips were present and other parts of the leaves showed signs of cell break down. The root system was fair for plants of this size and like other folia feed groups the pH was in the region of 5.5 to 6.0, again with definite signs of mixture break down. Not one of this group showed any sign of flower spike development, however, the new growth development was tremendous.

Group 5. Magamp + K. The leaves of this group were still of a yellow/green colour compared with the other groups. However, they were tough and leathery and very erect. There was not the slightest sign of leaf tip break down, nor were there any brown or black areas on any of the leaves. The 3, 4 or 5 bulb plants had nicely filled their 20 cm pots and the last grown bulbs were more than twice the size of the previous bulbs. The roots had to be seen to be believed. They were as thick as your little finger, white and very active. Mycorrhizal fungus activity was in evidence everywhere and the mix did not show the slightest sign of breaking down. The pH was still at 5.0 to 5.5 which was surprising as no acid had been used to keep the reading down. Many of these plants were big enough to be in 25 cm pots. The most surprising feature of all was the fact that 27 of this group had produced flower spikes and after all this was the most important fact of all.

Group 6. Osmocote. Still by far the best looking group. The plants had filled out into large, robust plants with long, dark green, healthy leaves which were inclined to droop because of their length. The last bulb sizes were all better than the previous ones and any grower would be proud to produce such plants. The root system was good, but again not up to Group 5, neither was there great mycorrhizal fungus activity. The mix did show signs of a break down and the pH test revealed 6.0 to 6.5, a drift away from the acid

side of the scale. Then the most disappointing fact of all, not one of these beautiful plants had produced a flower spike. If we were to persevere with this fertilizer we would have to vary the amount used or perhaps withhold it at the time of flower spike initiation.

Group 7. John Innes Slow Release Fertilizer. Good, strong growth continued with bright green leaves, nice and wide and very clean with little or no black tip or other brown or black patches. Of course this fertilizer contains Hoof and Horn, the first of the slow release fertilizers used very successfully by many of our older growers over the years. The root system was healthy and strong, although a little on the brown side. Fungal growth was active and the mix did show signs of breaking down and registered a pH of 6.0. There were eight plants in this group that developed flower spikes and all of the other plants were showing well developed new growth.

Group 8. Mix with 4 Seasons Fertilizer. Steady progress was made but not to be compared with any of the better grown groups. It would appear that the plants did not have time to settle down to any one way of growing before they are switched to another type of fertilizer every three months. This fact showed up in their results and it also showed in a poorer root system, less fungal activity and a more pronounced break down in the mix. The pH was up to 6.0 or 6.5 and quite a few leaf tips showed black tips. This group did not show any signs of flower spike development.

Group 9. A Bit of Everything Used. This group were now showing signs of over feeding with rather poor growth. The leaves were still an uneven green with yellow mottled patterns. They had been badly affected by black tip and die back and were also affected by fungal and bacterial problems on other parts of the leaves. The roots were still very poor and almost gave the impression of being burned and fungal activity was very slow. The pH of this mix was 6.5 to 7.0 and still showed furthest move away from the starting point of 4.5 As was expected this group did not produce one flower spike either, consistent with over feeding of orchids and many other crops.

The entire collection was immediately changed over to our standard mix plus Magamp used at the rate of 2 kg per cubic metre initially. Thereafter one teaspoon of Magamp was added to each 20 cm pot every six months until the plants were fully repotted again. The results we have obtained over the past nine years have been exceptional where between 75 to 80 per cent of flowering-size plants flower each year.

The most successful flowering results have been achieved with seedlings which, having been completely repotted eight times after removal from flasks, flowered just 24 months after removal from flasks. This is of course practical proof positive that the time and effort expended over three years was time well spent, and have repaid us handsomely with excellent flowers. However, as previously mentioned these experiments are an on-going thing and our latest trials using a newly-developed fertilizer in conjunction with Magamp is yielding exciting results. No doubt more will be heard of this after our trials conclude in 1983.

256 Jasper Road, McKinnon, Victoria 3204

Eleventh World Orchid Conference

It's not too early to plan for the Miami Conference in 1984. It takes place over the period March 1st to the 15th and that's only two years away.

The Orchid Society of NSW has set up a committee to plan for the event. Suggestions regarding itinerary can be sent to the secretary for attention of this committee. As with previous Conferences the committee will examine the proposals and quotations of several travel agencies in order to obtain the best deal.

Other societies have no doubt started their own planning. Details will be announced in AOR as they come to hand, together with data from the Steering committee in Florida.

SCOTTSDALE ORCHID SOCIETY

Scottsdale is a picturesque town in the mountains northeast of Launceston, Tasmania. The Scottsdale Orchid Society was formed a little over a year ago and the inaugural show was held on the 16th and 17th October, 1981.

Mr. Nick Van Den Bosch of Tullendeena is President. His splendid plants, *Cymbidium* Warrinya 'Parisienne' and C. Coraki 'Norah' were Grand Champion and Reserve Champion respectively.

Meetings are held on the third Thursday of each month at Kendall's Hotel, Scottsdale. New members and visitors will be made very welcome. Any orchid growers touring Tasmania will find a visit to Scottsdale very rewarding.

This is Tasmania's fifth orchid society.

Secretary is Mr. Wayne Pinner, his address is c/o PO Karoola, Tasmania 7254.

●

The principal factors in the growing of orchids are nutrition, temperature, moisture and light, and we must always remember that the importance of any one of these factors is relative to the other factors."

J. Murray Cox

Growing Variegata Oncidiums

E. A. (TED) BOON

For the past few years I have been growing oncidiums and allied genera with some degree of success. I have concentrated particularly on the equitant or miniature oncidiums.

Other growers may be interested in my views and methods of growing these genera. These remarks apply to North Queensland and Townsville in particular but growers in other parts may benefit from them.

There are some 34 species in the variegata section of the genus *Oncidium*. Five of these species have varieties, namely *O. leiboldii* and *O. velutinum* with one variety each, and *O. variegatum, O. lucayanum, O. guianense* having three varieties each. *O. guianense* is sometimes referred to under its synonyms *O. desertorum* or *O. intermedium*. There are eleven natural hybrids in the section.

Habitats of species and natural hybrids range from the Caribbean Islands, Bahamas, Jamaica, Cuba and the Dominican Republic. Most are found from sea level to 2,000 m in low rainfall areas. A few come from higher elevations where conditions of greater night humidity occur.

Most are epiphytic, growing on the branches and twigs of small low shrubs, others are found growing in grasses.

There are two types of growth; compact, with short rhizomes or none at all; and rhizomatous, with long rhizomes. Leaves are three sided with a groove on the upper edge, all are pointed, some having a blunt appearance, and they vary from wide to narrow.

In some plants the leaves are compact, forming perfect fans, and the number of leaves may vary. Other plants are lax, that is fewer but longer leaves. Basic leaf colour is green with some being highly bronze, while others are a purplish green.

Plants have no psuedobulbs and water is stored in the corky aerial roots and fleshy leaves.

In the genus only two species bear aerial growths, *O. prionochilum* and *O. urophyllum*. Both are from Greater and Lesser Antilles Islands. Aerial growths are produced once flowering has finished. When the spikes have become dry and brittle winds distribute the plantlets into grasses or on to branches and twigs of shrubs where they soon take hold. This habit of producing aerial growths is transmitted to their hybrids.

Flower colours range through white, pale pink, pinks to deep rose, lavender, brown and white, yellow, red, red and white, to purple in varying shades.

There are five important species in hybridising:-

O. triquetrum. Tan with red labellum is the best colour form in use. This species is useful in shortening long flower spikes in the other parent, and producing compact heads. Colour is recessive and in some cases it adds spotting to progeny.

O. pulchellum. Has pale to bright pink flowers and adds colour as well as full rounded flowers to its progeny.

O. henekenii. Flowers almost black with green edging. It dominates its hybrids in shape and colour.

O. guianense. Flowers are red and white. Dominates in shape and is responsible for yellow to pink coloured hybrids. Variety *alborubrum* influences red-orange colours.

O. urophyllum. Yellow flowers on long spikes. It dominates in yellow and also in size of flower.

My plants are housed (along with various genera) in a house with shadecloth roof and sides, except for the western wall which has fibro to cut the afternoon sun. Consequently air movement is unobstructed.

Plants were originally on the eastern wall where I had placed mesh to hang plants on, and where they received shade until around mid-day and then the hot afternoon sun. All plants did exceptionally well. As a trial I shifted them to the western wall in order to get the morning sun. This was a wrong move as plants did not seem to be as healthy or as happy and were on the decline. I have changed them back to their original position and they have begun to respond.

It was apparent that air circulating around plants on the eastern wall dried them out quicker. The western wall, being full fibro, cut air circulation to the back and blocked off the heat from the afternoon sun.

My plants are placed onto compressed cork slabs of suitable size, not less than 5cm wide and 5 to 8 cm long, depending on the size of the plants. A small piece of Elkhorn, or Polypodium, peat is placed at the base of the plant over the roots and tied on. I find nylon panty hose cut into thin strips more suitable than a thin plastic coated wire. It keeps the peat a little moister thus encouraging faster root growth.

Other suitable slabs can be the eucalyptus, box and chinky apple, timber, tree fern. They may be grown on small callistemon logs and in clay pots.

They establish well on tree fern, better I feel than cork, however it has one bad drawback in

that after a period of time it sours and loses its vitality. Plants then suffer root rot and plants can die unless action is taken to re-slab.

If tree fern is used it should be cut along the grain. This allows water and root penetration. Cutting across the grain results in a slab which will not allow water penetration, and very few, if any, roots will penetrate. Tree fern being high in acidity boosts the colour in flowers.

When I use pots I prefer clay to plastic, Clay thumb pots are ideal as they allow roots to breathe, keep cooler, and dry out quicker. As the plants have a fine root system medium to fine Quincan gravel with a little charcoal is used, or gravel and chopped tree fern. I have tried broken cork. Peat is never used as it becomes too wet and soggy and breaks down, resulting in root rot and usually loss of the plant.

Once plants have become too large for small pots they are transferred to pots not larger than 75mm. This is done at the commencement of new growth. Loose potting medium is removed from around the roots and dead roots trimmed off. Aerial roots are never removed unless absolutely necessary as these are a source of water storage.

Plants are then placed at the back edge of the pot and the gravel media replaced. I find most plants are in continual new growth.

It is best not to divide plants, unless absolutely necessary, because most will suffer major set backs and take a long time to recover and re-establish themselves. Where possible plants should be left to divide themselves naturally.

With the above slabbing method plants can be watered two or three times a day without problems, provided the plants are allowed to dry out between waterings. I feel plants are better watered in late afternoon or night here in the north. This allows plants to absorb water a little longer, especially in summer. Winter, however is a little different, plants are watered around 3 to 4 pm. I find morning waterings result in problems, plants are left to broil when water lodges in new growths and there is not enough time for them to dry out before the heat of the sun does its damage.

When any new plants of genera come into my collection they are not watered for at least 24 hours. This allows them to acclimatise to my conditions. It also helps prevent any fungal attack. In any case it seems to have overcome problems with other genera which arose for me in the past when new growth has rotted off within 24 to 36 hours.

Towards the end of 1980 I tried two experiments with consignments of plants from the south. In one I slabbed the plants and then soaked them in sugar and water solution for an hour a day for three days, then placed them in the bushhouse and left them for 24 hours before watering. Plants responded well and within days new roots appeared. One plant died in that period due, I suspect, to an insect problem.

The second experiment involved a number of plants which were not the best when received. These were slabbed, using box wood and cork, and soaked in a Formula 20 solution. I had hoped I would have saved those plants, which should really have been discarded by the nursery, but it was not meant to be. Most of them responded well and within days had produced a massive root system. Six months later quite a number from both consignments were in spike.

One of the many things I find delightful with these living gems is the range of colours within the hybrids. All the colours of the rainbow, along with spotted and blotched flowers. All are borne on short to long spikes with small to large heads of flowers. Naturally the size and condition of the plant has a lot to do with the size of spike and number of flowers. Of my close on 300 plants 75% will throw lateral spikes once the main head has finished flowering, these in turn will again throw spikes, but not as long, although the size of flower does not alter.

Like most orchid growers I have tried my hand at hybridising and have found Equitants a little difficult. They readily set pods but do not always contain seed. This may be due to climatic conditions, the particular plants being used, or the time of the year. I have had dozens of pods during the main flowering season, of which four had seeds and burst before I could harvest them. This usually happens when I'm at work or something else has to be done.

At least two species, *O. triquetrum* and *O. guianense*, prefer to act as male and are not receptive as female. Naturally some hybrids will follow this pattern. Again with experiments, I've tried using variegata oncidiums with rodricidiums and larger oncidiums in the hope of getting something unusual, but with differing chromosome counts this is virtually impossible. On occasions I've had pods set and begin to fill out and then have had them drop off.

Although not as popular or as plentiful hybrids of the man-made genus *Rodricidium* (= *Oncidium* x *Rodriguezia*) are treated in the same manner as the variegatas, although I prefer to slab plants in preference to growing them in pots.

Their colours are not as vibrant or as intriguing, mostly into pinks, burgundy-pink, yellows and oranges.

The best of these to my way of thinking have been:-

R. Ginger Pop (*O. flexuosum* x *R.* Burgundy). Most have been into the Burgundy colours with

cream to yellow labellums, the best ones into the autumn tonings. Sepals and labellum are cupped and the labellum longish and narrow.

R. Monica Bass (*O. flexuosum* x *R. fragrans*). Pure white segments with a yellow crest in the labellum.

R. John Kelly. One of the newer hybrids (= *R. secunda* x *O.* Munequita). Very floriferous. A nicely shaped flower with red-pink sepals and petals and a pale pink labellum.

R. secunda x *O.* Colorburst. A vibrant largish flower, orange with red spotting.

Newer intergenerics include *Howeara* Mini-Primi. Cup shaped sepals and petals, the sunburnt orange blooms are on short pendulous sprays.

[A clone of this cross is pictured and described in this issue for its Cultural Award. Editor].

Still to flower, and awaited with great expectations, are my plants of the cross *Howeara* Mini-Primi x *Rodriguezia decora* and the cross *Rodricidium* Tricora x *Leochilus oncidioides.*

Insects are a big problem, especially the sucking type. These lodge in the base of the plants protected by the brown sheaf and cause untold damage to leaves and roots.

Red Spider mites are the worst. Pitted marks on the leaves are the result of an insect attack, this then leads to fungal attack.

To rid plants of these pests I use at intervals Kelthane, Diasnon, Diazmin and Malathion and mix in a little soap detergent as a wetting agent to ensure a better kill.

Fungal attacks have so far been no real problem. Damping off of a new lead has been the main problem and for this I use Benlate, Bavastin, Captan or Diathane, on different occasions.

Fertilizers used in rotation are Liguifert, Nitrosol, Field Pak, Yates Orchid Food, Campbells 30-10-10, and Campbells 11-13-16 for boosting flower production.

Because of the type of potting material used, namely Quincan gravel with or without charcoal, I have used slow release fertilizers such as Magamp in an experimental way. One plant was used when the new growth was semi-advanced. No apparent increase in growth has been noticed. The next growth may be different. I would not recommend using Magamp in southern composts for this genus.

To date one of my plants has been successful in obtaining an award. It is one of four clones of an overseas mericlone. *Oncidium* Wilbur 'Wilma', HCC, received its award from the Tropical Queensland Orchid Council judges.

In general, once plants are established and cared for equitant oncidiums are a joy to grow and in flower are pure delight.

Air movement and allowing plants to dry out between waterings are the two most important points to remember.

Don't reslab or repot plants straight after flowering. Wait until a new growth commences. If the above points are followed there should be no trouble in growing one of the true gems of the orchid world.

Epilogue. Since the above was written I have moved house. This necessitated a move of some thousands of plants and the construction of a larger bushhouse.

The new construction is of water pipe. A security mesh over the top and side supports a 70% shadecloth plus an area of 50% shadecloth. Fibro sheeting from the ground to 90 cm allows maximum air movement through the remaining height of the walls.

The oncidiums and related intergenerics were the last plants to be shifted on the last day. Consequently they suffered during the final stages of bushhouse construction through neglect, dehydration, spring winds and insects. These little set backs did not deter them from flowering their heads off.

On completion of the structure a suitable location was chosen as near as possible to their original location in the previous growing house. Direction of rain was also taken into account in locating them, backs of the slabs being placed so they would receive the prevailing wet season weather.

Plants are responding in spite of a number of losses.

Another plant has now received an award. *Oncidium* Angelique received an AD for outstanding colour. I have given it the clonal name 'Imp's Delight'.

2/18 Patrick Street, Aitkenvale 4814.

"Orchids are members of the great plant grouping called the monocotyledons, which are distinguished by having only a single seed-leaf upon germination of the seed." *Alex D. Hawkes.*

"Too often orchid growers have been responsible for the wholesale ransacking of countries for beautiful species. Fortunately the appearance of hybrids has made the cultivation of the natural species less important; the hybrids are often easier to grow, stronger and more free flowering than their wild parents, and so more desirable than their wild parents." *R. E. Holttum.*

"The fertility of any plant will always change after alteration of ploidy." — Thavorn Vajrabhaya in *Orchid Biology.*

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Lovely equitants are growing in popularity



***Oncidium* Wilbur 'Wilma',** HCC/TQOC-QOS
Delightful in colour, fantastic in shape. With 'Wilma' it is love at first sight.

The two greatly-enlarged illustrations on this page reveal the beauty of individual flowers of two equitant oncidiums. Coupled with the perfection of each flower is a profuse inflorescence in mature plants as shown by the top plant opposite.

Equitant breeding was initiated by Goodale and May Moir of Hawaii. Growers in Australia, particularly in Queensland, are taking to them with affection. See the article by Mr E. (Ted) Boon in this issue. Mr Boon has been growing them for years and now has over 300 plants.



***Oncidium* Tiger**
A cross between *O.* Rainbow and *O.* De Lovely. Equitant breeding is now into the third and fourth generations. The Moirs' book on equitant breeding is outstanding. See mention elsewhere in this issue.

Two Photos by E. Boon



Oncidium (Red Glow x Red Belt) x *O.* Fort Myers 'Caitlin'

This beautiful plant demonstrates why equitants are so popular. It carried 22 spikes with 15 blooms on each. Mr K. Howard is the grower. It was awarded a Certificate of Cultural Commendation by QOS judges.



Howeara Mini-Primi

Mr Ken Smith of Redcliffe OS received CCC for this beautiful plant. It was grown on a virgin cork bark log and carried 15 spikes, each with 30 blooms. Ken uses a half-teaspoon of Osmocote over the log and replenishes it when spent. Watering is twice a week in summer and when needed in winter. It is fertilized with Thrive or Nitrosol once a week.

H. Mini-Primi is from a cross of *Rodricidium* Primi and *Leochilus oncidioides* registered by R. E. Howe in 1976. See article by Mr E. Boon in this issue.

QOS AWARD PHOTOS

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7th AUSTRALIAN ORCHID CONFERENCE

Dr H. E. KUNZE

September 1982, is the time for two exciting events in Brisbane — the 7th Australian Orchid Conference and the XII Commonwealth Games. It is also Springtime, when we enjoy the pinnacle of sub-tropical floral beauty and the pleasure of warm Spring days and refreshing cool evenings. Keen on orchids? Why not make the conference the highlight of your 1982 annual vacation?

The conference promises to be exciting! Gifted international speakers include Rapee Sagarik, Maurice Lecoufle, Milton Carpenter, John Hanes and Bob Dugger who will cover such topics as advances in warm-growing oncidium intergenerics, the latest odontoglossum and miltoniopsis hybrids, Thai vandaceous orchids, red paphs, etc. A star-studded cast of Australians will give the visitor a good insight into what major developments have emanated from Australia and what is yet to come.

Kevin McFarlane from Cairns, in the tropical north, has worked for many years in pioneering new types of dendrobiums — the candy-striped Cooktown Orchid, miniaturised orchids using *D. canaliculatum*. Most recently he has moved into a quite new intersectional area using our magnificent Rock Lily Orchid, *D. speciosum*, with combinations of phalaenanthe, ceratobium and latourea species and hybrids. *Dendrobium speciosum* produces half metre inflorescences bearing scores of cream to yellow, highly-scented flowers. Kevin's most successful cross has produced a free flowering orchid retaining the yellow tepals of *D. speciosum* with a much-broadened and highly-coloured labellum, on tall upright spikes bearing many flowers. Kevin is a man of many parts, and his interests extend to multi-generic work in the vanda alliance. He has taken advantage of his endless summer climate and the growing conditions it affords to make crosses using phalaenopsis, ascocenda, devereuxara, etc. hybrids emanating from *Devereuxara Robesan* should be spectacular!

Two other Australians derive their fame from work on cymbidiums. Alvin Bryant, from New South Wales and Bob Nicolle from South Australia, have made major contributions both in the area of breeding and also in cultivation and ploidy control. Bob Nicolle, a commercial grower, has specialised in pure-colour cymbidiums both in standard form and more recently as miniatures. Alvin Bryant has been well known to Australians both for his work on ploidy induction and also for his excellent writings on orchid cultivation.

Toowoomba, the Garden City of Queensland and Gateway to the Darling Downs is the home of Noel Grundon, an agricultural scientist who has interests covering orchid physiology and nutrition, plant pathology and Australian native hybrids. Another scenic area in south-east Queensland which has attracted a number of orchid growers is Tamborine Mountain. The somewhat cooler and moister climate lends itself to the growing of numerous indigenous species such as *D. kingianum, D. falcorostrum* and others as well as softcane dendrobiums and cymbidiums. Harry Spence has worked with softcane dendrobiums for many years and Ted Gregory has considerable experience in cultivation of our native species and their use in hybridisation, particularly using the *D. kingianum*. Many beautiful hybrids have been produced using the species *D. kingianum, D. tetragonum, D. falcorostrum, D. gracilicaule* and *D. speciosum*.

The conference is to be held in one of Brisbane's major ethnic centres, the Greek Community Centre, which will also be the venue for the extensive exhibits. A 'Night to Remember Dinner' will be held at the nearby bay-side suburb of Cleveland. Here, an old courthouse has been converted into a modern restaurant, set in gardens stretching to the water's edge.

Brisbane itself arose from a penal settlement formed on the banks of the Brisbane River. A hilly town with a population of one million, it is set as the centre of a diverse environment. Bordering on island-studded Moreton Bay, it provides easy access to all types of water sports and to the resorts on Moreton and Stradbroke Islands. Stretching 100 km to the north and south are beaches rivalling those anywhere in the world. The high-rise, congested, exciting Gold Coast has something to titillate almost any tourist, while the northern beaches around Caloundra and Noosa provide a somewhat more tranquil approach to sun and surf. The hinterland is largely rural, giving way to spurs of the Great Divide, the longitudinal backbone running 4,000 km down the eastern edge of the continent. One hundred kilometres west of Brisbane is Toowoomba, set on the eastern escarpment of the mountains. Noted for its cool climate and wonderful gardens, it is a major centre for the Darling Downs, whose wheat fields and grazing lands roll majestically west.

The traveller, able to take in more than Brisbane and its environment, is only an hour or two by plane from the major island resorts of the Great Barrier Reef or the game-fishing grounds off Cairns. Anyone with an eye for marine beauty would be well repaid for making a trip to our glorious coral reefs!

Won't you think about joining us for such an exciting experience?

Accommodation may be difficult for late comers, at the moment we are able to offer a good range but prompt action is a necessity. Indicate the type and price range you favour now!

For full details on the conference, the dinners, the tours and accommodation, please drop us a line now:

The Honorary Secretary, 7th Australian Orchid Conference, 83 Hebe Street, Bardon, Brisbane, Queensland, Australia 4065.

SEE YOU IN SEPTEMBER! ! !

ORIGIN OR INORGANIC FERTILIZERS

Justus Von Leibig analysed the ash of plants to determine nutrients and showed that plants could be boosted by other manures than dung, that is by weak solutions of the essential elements revealed by the analysis.

Magnet Town and its Nurseries

The Seventh Australian Orchid Conference and Empire Games will make the fascinating and dynamic town of Brisbane a logical place to be in during late September, 1982.

A late report is that the accommodation situation has improved, so if thoughts of any difficulty has inhibited your wish to enjoy these events, then don't let it. But act quickly, as always, the first in line will be best served. Accommodation Officer Mrs. B. Young will look after you. Write to her at 38 Hebe St., Bardon Queensland. 4065.

The conference programme will be fascinating and rewarding, and there will be opportunities to explore Brisbane and find out what a fascinating city of a million people it is.

AROUND THE BRISBANE NURSERIES

But orchid folk will wish to see orchids and although displays by, to date, 44 societies and individuals at the Conference Show will ensure a breath-taking concentration of genera, it is at the nurseries that the unique specials capable of complementing your own collections will be found.

So you need to know something about the nurseries. What they produce, how to get there, and their price ranges. It is suggested that before coming to Brisbane for the Conference, or at any time for that matter, you write for the catalogues of those which interest you. Addresses are given below.

Nurseries described are not in any particular order as they are drawn from a hat. On Tuesday, 28th September three of them are included in tours. A morning tour to Barry Paget's Orchidworld and Jim Mackinney, and an afternoon tour to Sunshine Nursery and Bunya Park Zoo.

Humpybong Orchid Nursery. Jim and Betty Raddatz have a huge range of cattleyas and phalaenopsis. They also stock anthuriums. They have been growing for 25 years, commercially for 18 years.

Much of the stock comes from imported mother flasks from leading overseas hybridisers. They have their own laboratory and do some very choice hybridising and mericloning.

The name *Humpybong* is commonly used for the Redcliffe Peninsula. It refers to the aborigine's name for the 1824 white settlement there which later moved to the present site of Brisbane.

Betty ran a very successful florist shop for years while Jim established the nursery. Both businesses grew so Betty sold the shop to work in the nursery. Daughter Mrs. Roslyn Hawley also assists.

Redcliffe is worth a trip in its own right. It is 30 km north of Brisbane GPO, the last part over the Houghton Highway. By car go by the North Coast Highway. By public transport take the train to Sandgate and then the Redcliffe bus and ask to be put off at Collins St. The nursery is at 38 Collins St., Woody Point (zip code 4019). Open throughout Conference. A phone call first (07) 284 3283 is not necessary but is helpful.

Aranbeem Orchids. Ray and Betty Maidment established the nursery in 1963. Son Ross Maidment is a B.Ag.Sc. He runs the laboratory and breeding programmes. Ross is a popular guest speaker. Son Glen works part time in the nursery.

A quarantine house ensures close supervision over imports.

Production is centred on well grown small plants particularly cattleyas, dendrobiums, vandas and equitant oncidiums. Cool growing Asian species are also stocked. Flasks and community pots are available. Heat is used only for dendrobiums during the three winter months.

The nursery is 200m from Geebung Railway Station on the main northern line, and only 25 minutes from Brisbane. A bus service also passes nearby. Out of town visitors can phone for details at (07) 263 6425. Open 8am to 5pm, Monday to Saturday.

The origin of the name Aranbeem is of interest. It arose from pot marks used when exhibiting at shows, viz. R, and B. M. (Ar-an-be-em).

Mackinney's Nursery. Jim Mackinney has been a popular figure in the orchid world. As President of QOS and the AOC he proved a hard worker and has not ceased to be active since retiring from these posts.

The nursery has been established in its present location for twenty years and a very diverse stock has been built up.

The nursery is closely associated with Deane's Orchid Nursery of Sydney. Many unusual and worthwhile crosses are exchanged. Flasks of hybrids and mericlones are imported from top overseas nurseries.

Besides Jim, Brenda, and Rod Mackinney there are three other permanent staff members, plus casuals.

Via the south-east freeway the nursery is 15 minutes from the city. A bus will drop you at the stop which is only a few minutes walk.

Open 8am to 5pm Mondays to Saturdays. Phone 345 1916.

Orchidglen Nursery. Proprietor Ron Williamson. A fantastic nursery for unusual species and hybrids. A good range of paphiopedilums is carried. As Ron will be fully engaged during the

Conference the nursery will be closed. Arrangements may be made by phone (399 4353) or by contacting Ron at the Conference, for a post Conference appointment.

Orchidworld Nursery. 1422 New Cleveland Road, Capalaba West, Brisbane. Barry Paget is the proprietor of this nursery situated on the South-east side of Brisbane on the road to the Redlands District, which is the 'salad bowl' of south-east Queensland. The nursery has operated on a full-time basis for the last six years, open for business from Monday to Saturday, during the hours of 8am to 5 pm. Sunday visits are available on an appointment basis.

Myra Kelley and Graham Ireland are assistants with many years experience in orchid growing behind them.

A wide range of genera is grown at "Orchidworld". Vandaceous, dendrobium (phalananthe, soft cane and antelope), cattleya and allied genera, phalaenopsis, oncidium and miniature cymbidium are the principal genera cultivated, under both shade-house and hot-house conditions.

Transport is available to the nursery, the Redlands bus service running fromNorth Quay in the city to the junction of Old Cleveland Road and New Cleveland Road, where the nursery is but a short stroll. This nursery will be open for business throughout the Conference (Sundays included). Further information will be readily supplied by phoning 390 1803.

Sunshine Orchid Nursery. Owned by Bruce and Shirley Denham who started 15 years ago. They have a staff of six. The nursery covers just over one hectare. There are extensive stocks of cattleyas, hard and softcane dendrobiums, vandaceous, cymbidiums, oncidiums, and phalaenopsis. There is a modern tissue and seed raising laboratory. A reciprocal supply agreement is maintained with a large hybridiser in Hawaii. Besides local trade there is mail order to all States and overseas.

For personal calling catch the Redcliffe bus in the city to the junction of Roghan Road and the Old Gympie Road. The nursery is about 400m west of Gympie Road on top of the hill. Or take train to Bald Hills Station, then phone nursery 263 4902 for pick-up.

●

WORMS AND SOIL

Darwin calculated that the weight of cattle which a meadow will support is exactly balanced by the total weight of earthworms and other soil organisms under the soil. Earthworms improve the texture of the soil and assist in breaking up decaying vegetable matter. It is desirable that they be kept out of orchid compost to prevent it breaking down too quickly.

Catalogues received

Although most nurseries don't request it we suggest a stamp be enclosed with request for a catalogue.

Tom Henry Pty. Ltd. Eight foolscap pages list just about all the currently famous names in flowering size cymbidiums, besides established backbulb propagations. There's a good list of seedlings plus community pots of five and ten of the one cross, mericlones, minicyms and novelty cymbidiums.

Flowering size cattleyas are also featured. This nursery's specialty is paphiopedilums and a select range of showbench quality is available in two growth plants.

Address is PO Box 71, 25 Ruskin Row, Avalon, NSW.

Mackinney's Nursery. A neatly printed 24 pages cover a wide range of genera, with a diversity of mature plants, seedlings and mericlones. There are several interesting native crosses listed and a fine array of exotic species. A catalogue for the grower who is looking for the unusual.

Address, 82 Turton St., Sunnybank, Queensland. 4109.

Sunshine Orchid Nursery. A well printed 24 pages. It features a huge range of mericlones in - cats, phallies, vandas, oncidiums and dendrobiums. Also seedlings of all these.

A very complete list of accessories, includes everything for constructing growing houses and everything necessary for culture.
Address is 2034 Roghan Road, Bald Hills, Qld. 4036.

Orchidworld Nursery. This 24 pages and cover catalogue has attractive colour shots of vandas and cattleyas on the front and back. This nursery is famous for vandaceous orchids and a huge range is listed. However the cattleya and dendrobium listings are even greater. There are many of the complicated man-made genera such as Holttumara and Kagawara. The oncidium range includes many equitants.

A surprise is to see listed *Sarconopsis (Sarcochilus* x *Phalaenopsis)* and Sartylis *(Sarcochilus* x *Rhynchostylis).* Naturally these rarities have a high price ticket. Address is 1422 New Cleveland Road, Capalaba West, 4157.

Mt. Beenak Nursery. This nursery, owned by Clive and Agi Halls, is Australian agent for Featherhill Exotic Plants of U.S.A. Although only six pages it is full of outstanding cymbidium crosses for standards and miniatures. They offer good buys in compots and flowering size plants.

A small stock of American bred paphiopedilums is also carried. Address is PO Box Yarra Junction, Victoria, 3797.

How some of the champions were grown

OLIVE AVERY

The prize winners of the 1981 shows in and near Brisbane obviously knew how to grow their plants. Careful culture produced outstanding flowers. I was able to ask many of them how they did it. But even without verbal communication it is surprising how much information a peep at and into pots will reveal.

I was intrigued by Mr and Mrs Unthank's champion of the QOS Autumn Festival, the beautiful bi-color Phalaenanthe type *Dendrobium* Paradise 'Pearl'. It was happy in a clay pot and a compost of bark and charcoal.

At the Brisbane OS Autumn Show a clay pot was favoured by Mrs M. Lye for her champion *Dendrobium bigibbum* var. *superbum*, the State floral emblem. It was a massive plant and needed a 15cm pot and had been grown under a mango tree. At this show the champion specimen owned by Mrs L. Grubb, was *Bc.* Maikai, an interesting cross between *Brassavola nodosa* and *Cattleya bowringiana*. It had twelve sprays of really beautiful spotted blooms. The petals and sepals were characteristically *B. nodosa* and the *C. bowringiana* was very apparent in the lovely shaded labellum. It was in a wooden slatted basket and a compost of bark and charcoal. It is fertilized fortnightly using Campbells, Nitrosol, and Zest in rotation.

Mr Eric Boston used bark and charcoal to grow the reserve champion, *Blc.* Helen Brown 'Showpiece'.

Another superb winner was a clone from the cross *B. nodosa* x *Lc.* Lorraine Shirai, owned by L. and D. Smith. The two yellow flowers had labellums covered with magenta spots. The plant was in a clay pot with a bark and charcoal mix. It is fertilized regularly with a rotation of half strength Garden Gold, Zest, and fish emulsion.

Champion novice was won by Mr and Mrs Broughton with an odontocidium seedling of the cross *Oncidium maculatum* x *Odontoglossum cariniferum*. This plant had three racemes of very showy blooms with yellow-brown segments and white labellum. Compost was bark and charcoal in a plastic pot. Champion species, *Aerides lawrenciae*, had two sprays of lovely white and purple flowers, and a really attractive fragrance. It was in an earthenware pot but with the roots almost bare except for a few pieces of cork.

At Casino in northern NSW the show champion was a six flowered *Cattleya* Little Susie, owned by C. and M. Davis. The shapely flowers were shown to perfection in a clay pot containing only bark compost.

Mr E. Rankin's reserve champion was a clone from *Dendrobium* Limberlost Beauty x *D.* Sensation with six large sprays of very large, well shaped blooms. Compost was bark in a 75mm pot. It was grown in a glasshouse and fertilised with half strength Nitrosol weekly.

Champion novice grower was Mr F. Causley, his *Oncidium* Kuron x *O. tigrinum* being grown on tree fern. Champion miscellaneous was *Oncidium* Palmyre, grown by Mr and Mrs Saunders. The plant was on compressed cork and had one flowering stem. It is grown under bushhouse conditions, watered late in the afternoon on every day in summer, and fertilized with Field Pack and Campbells.

Tweed Heads OS is also across the border. Show champion *Blc.* Rosemary Hayden had two shapely flowers with lavender segments, a light yellow lip fringed with lavender, and deep yellow in the throat. It was grown in fir bark under a fibreglass roof and fertilized once a week with half strength fish emulsion or Nitrosol.

Reserve champion *Howeara* Mini-Primi thrived on unusual culture. It was potted in very old broken clay bricks. These are often soaked in solutions of urea, fish emulsion, and nitrogen. The seven flowering stems with many branches of glorious golden blossoms proved to all who saw them the reason why this plant is so much desired among orchid growers. The grower was Mr G. Sandercock.

At Brisbane's Eastern District Orchid Autumn Show the champion specimen, owned by Mrs M. Pateman was *Dendrobium* Lady Caroline x *D.* Maui Beauty. It was a large plant in a large plastic pot and a compost of bark and charcoal, carrying about twenty racemes of open flowers with many more to open.

A beautiful *Vanda* Suorai attracted much attention. Potted in coarse bark and charcoal, and with roots curled around the plastic pot, it had eleven blooms, the dorsals pinkish with magenta spots, the lateral sepals and labellum light yellow. Mr L. Vickers must be very proud of this lovely orchid.

Redcliffe OS Show Champion, owned by Ron Turner, was *Vanda* Jennie Hashimoto x *V.* Patou. Potted in a 10cm slat basket with course bark and charcoal, it had nine large flowers with dark red colourings on a deep pink-cream ground, beautifully shaped and a fine texture.

Champion Specimen of this show, Mr Ken Smith's *Howeara* Mini-Primi received a CCC. It is pictured and described elsewhere in this issue.

Mrs Leanne Smith owns the Reserve champion *Lc.* Alicidor 'La Tuilerie'. Three large beautifully rounded blooms were yellow, mauve and purple with deep yellow in the throat. Grown in very coarse bark and charcoal, and fertilized occasionally with SM3, fish emulsion, or Nitrosol.

At the QOS Spring Show the most interesting plant from a cultural point of view was Champion Novice entry, *Dendrobium* Yukidaruma 'King' owned by Mrs E. Spencer. This extra large size plant had many canes laden with beautiful white and maroon flowers. Uncommon to see was the large piece of round tree fern that was its pot. A hole was made in the centre of the fern after the plant roots were placed in this the cut up pieces of fern were used as compost. If anyone has any doubts whether this method works seeing this beautiful plant would convince them. Congratulations Mrs Spencer.

The West Moreton Orchid Group Reserve Champion was *Vuylstekeara* Cambria 'Plush' owned by Col Voss. This plant had two stems of blooms, each bloom about 75mm across, the segments were very dark maroon. Growth was under 75% shade in cool conditions and using a plastic pot. Weekly fertilizing rotating fish emulsion, Thrive, Garden Gold and Nitro Phoska.

Ipswich Orchid Society champion was *Lc.* Bonanza 'Cornucopia', AM/AOS, owned by Mr Les Lobley. Its two extra large blooms drew a great deal of attention. Growth was in bark and compost using a clay pot.

Champion specimen at Eastern Districts OS Spring Show was a *Dendrobium linguiforme* entered by A. and O. Avery. It covered a large piece of tea-tree log with its tongue-like leaves and masses of feathery white perfumed flowers.

Mr and Mrs Tom McCosker of Glasshouse County Orchids Society were awarded a Certificate of Cultural Commendation by judges of the Sub-Tropical Orchid Council for their *Dendrobium* Bardo Rose. Tom obtained this plant as an aerial about eight years ago and has grown it in a mixture of charcoal and bark. It now fills a 25cm pot. The plant has 79 bulbs, only three of them without foliage. Stems are 18cm long. The 49 flower spikes were 16cm long carrying 240 flowers, each 25mm wide, and 19 buds.

North Brisbane OS Spring Show Champion was a clone of the cross *Cattleya* Auld Acquaintance x C. Karae Lyn Sugiyama 'Silver Chalice'. This really beautiful white flowered cattleya was in a plastic pot and a compost of fir bark and charcoal. It is fertilized every two weeks with a rotation of half-strength fish emulsion, Garden Gold, Nitrosol or Zest, and grown under the glass roof section of a bush house having glass on three sides.

Review. Among the outstanding winners about which it was possible to get some idea of the cultural methods used to grow them bark and charcoal, generally in the ratio of two bark to one charcoal, was the favourite compost. It was interesting to note the high proportion of clay pots compared to plastic pots. Wooden slat baskets seemed confined to vandaceous plants, and slabs mainly to oncidiums. Cork slabs were popular.

But without doubt, for the winners, there was that little extra touch of tender loving care.

24 Brand St., Hemmant Q. 4174

PIONEERS OF *VARIEGATA* BREEDING

In their book "Breeding *Variegata Oncidiums*", Goodale and May Moir, who pioneered this field, have this to say:-

"Variegata have often been called equitants. Webster's New International Dictionary (2nd Edition), defines the adjective equitant as meaning 'overlapping each other, said of leaves whose bases overlap and bestride the leaves within or above them, as in the iris'. This definition also describes the growth of a great many genera in the orchid family. However, some of the species of *Variegata* are not equitant, for they have a loose arrangement inside of a tight fan. Fr. Kranzlin must have realised this when he wrote his 1922 monograph on *Oncidium* and named this section *Variegata*, after the type species *variegatum*. This is the system used by taxonomists; the first named species often becomes the type species, even when it is not typical."

If you are one of the many growers enthralled by these exciting little plants then the Moir book is for you. It is published for the Harold Lyon Arboretum by the University Press of Hawaii, 2840 Kolowalu St., Honolulu, Hawaii 96822, USA. Order direct from publisher. Price $12, plus 60¢ postage. This book was reviewed in the March, 1981, A.O.R.

WINNING IDEA FOR NEW SOCIETIES

Warringal Orchid Society is an old established and very progressive Melbourne society. Ararat is a young orchid society but definitely determined to go places. However, it does not yet have the luxury of a monthly bulletin.

So — Warringal OS is adopting Ararat OS to the extent that Ararat will share Warringal's monthly bulletin. Ararat will contribute articles and news of mutual benefit. It is expected that inter-society visits will be arranged, and that Warringal will supply speakers occasionally. Ararat is about 160 km west of Melbourne.

What a splendid way of helping a new society get established. Is your society old established with a new one nearby?

THE FIRST FLASK

LAURIE JARVIS

The first flask means the first protocorm to seedling in which you will have your first enjoyment of this kind. Seeing that swollen seed turns green you will know what I mean by this first enjoyment. There are many ways to grow orchids seeds and the flasking of them the way listed here I have found to be both easy to follow and reliable.

The following seven ingredients are necessary for this method:

(1) THE MEDIA
(2) FLASKS (JARS, BOTTLES)
(3) STERILISING (PRESSURE COOKER, BOILER)
(4) MEANS OF FLASKING
(5) THE SEED
(6) CLEANLINESS
(7) PATIENCE

Now we will go through each one individually.

(1) The media. There are many recipes for seed raising media. I prefer to use a laboratory supplied one — this makes one litre of media. In mixing your medium do not use any metal container or stirrer as this will alter the pH which is at the right level when purchased for the genus you are sowing. I use a glass coffee percolator jug and a wooden spoon for stirring. Place medium mix in 500 mls of hot distilled water and heat further stirring all the time until dissolved. Now add enough distilled water to make one litre and bring to boil. Pour medium into the clean flasks (jars or bottles) about 15-20mm deep. Try not to let the solution touch the sides of flask. The type of flask you use can be household jars or bottles, I find jam or pickle jars are a nice size to use. The stoppers I make from a piece of aluminium foil about 120mm square over which I place a piece of gladwrap and secure both with an elastic band around the neck of flask. But just for now when we sterilise the flask we need to use only the foil cover. This is placed on the flask as soon as you pour your mixed medium into each one. They are now ready to sterilise.

For this you will need either a pressure cooker or a boiler. If you use a pressure cooker you sterilise your flask for 15 minutes and if you use a boiler you must sterilise for one hour. I use a boiler because I can sterilise one mix of about 10 jars at once. Place hot water into boiler the depth of the media in the flasks then place your flasks into the water with the foil over the top of them. Boil for one hour with the top of boiler on. Remove flask from boiler and place them on bench to cool. Now place the gladwrap and elastic band on flask, and place flask in a position where it can stand and set. I leave all flasks to stand for about five days before sowing. This allows you to see if any were not correctly sealed or sterilised and they should show contamination in that time.

Method of flasking. The method of flasking is to use a foam esky as a sterile cabinet. I will now describe how it may be adapted.

First purchase an average size foam esky sold at Woollies or Coles for about $3. When you have your esky remove the handle. Now the next step is to cut out the centre of the lid as in fig. 1. You will need a pane of light glass to glue onto your lid which is your viewing window for the unit. When you glue the glass to the lid, use araldite because some glues will eat away the foam. Your next step is to cut out two armholes in the side of the esky as in fig. 2. Place the holes at comfortable working size, not too close together or not too far apart. Now you will need a piece of foam 25mm or 50mm thick to cover over your armholes which are secured to the inside of your eskly as in fig. 3. If you can obtain two lengths of 100mm diameter plastic pipe 100mm long these are secured into your armholes as in fig. 4. Your esky is no longer an esky but a flasking unit and we will refer to it as that from now on. If you cannot obtain the piping for the armholes you can make them out of a piece of plastic formed into sleeves.

Here is a list of items you will now need to continue the flasking: rubber gloves, plastic sleeves, phials to sterilise your dry seed, eye dropper, measuring cup, bleach for sterilising (White King brand is a good one), sponge, cloth, sharp knife for green pods. We are now ready for the main ingredient *the seed* and only you can choose or grow the best. So in this I will stress that you are about to start a two to four year project to see your seed grow to a flowering size plant so take all possible effort to pick only the best parents.

If you don't have an outstanding flower to pollinate, maybe a friend does. Don't forget, this applies not only with hybrids but also species too. Inferior or contaminated seed can only lead to disappointment and a waste of time.

We will cover three types of seed — dry seed that floats in the disinfecting fluid, seed that does not float and also the green pod. Firstly the dry seed. Take a glass phial and half fill it with a solution of distilled water and 4% bleach. Place in enough of the seed you intend to sow. This takes some practice — you will find you either sow too lightly or too heavily on your first attempts. Try

about the size of a match head for four to five flasks but this will depend on your own judgment and whether or not you like to sow lightly or heavily. Now place the top on the phial and shake for about 5 minutes then let stand for another one to two minutes. This lets the seed settle. Place this in your flasking unit which is sterilised by this time as mentioned in the next section.

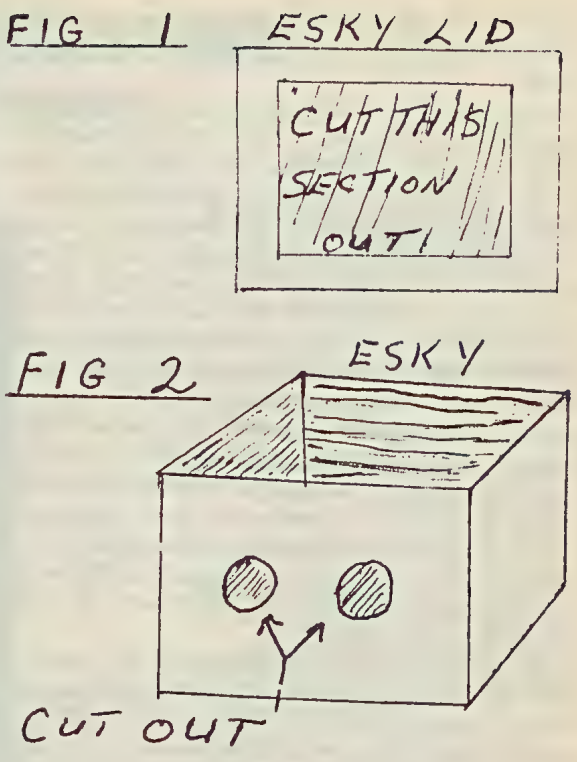
Now if the seed floats I find it easy to have a sterilised glass and a small piece of cotton cloth such as a lady's hanky. Place hanky over glass and push the centre to form an indent. Now take an eye dropper and lift the seed from the solution and place it into the indent in the cloth. The seed will be on top of the cloth, now using a stainless steel skewer with a flattened end or similar object place this seed into flask. If seed does not float then place eye dropper into solution and draw enough for a flask into the eye dropper with a small amount of solution. Wait for a second and seed will drop to bottom of dropper. Now place seed into flask with a small amount of solution. When you have done this place the foil back over the flask straight away. Try not to leave flask open for any length of time so as to lessen chance of contamination.

We will now cover the green pod method. I think this method is the easiest of the three. Take your seed pod and sterilise in a 10% bleach solution. A good idea is to scrub the pod with an old but clean tooth brush. When you have soaked the pod for a few minutes take a sharp stainless steel blade (a new safety razor blade will do) that has been sterilised in a 10% bleach solution. Now open flask and slice the pod to expose the seed. With the blade scrape enough seed into flask. I find with this method you tend to sow heavier than the other methods.

We are now ready to go through the steps involved in sowing the seed. This brings us to another important ingredient – *cleanliness.*

Cleanliness. Carefully pick an area to undertake the work. The kitchen is one of the best places. Have as little air movement as possible. Close doors and windows. Mix up a quantity of 10% bleach solution and wipe down your work area. Now take your flasking unit and clean inside and out. It is most important that the unit and the lid are thoroughly sterilised. Before you place any articles in the unit it must be washed down with the sterilising solution. These are the items you will need inside the unit before you begin. It is vital not to open the lid till you have finished and the flasks are sealed with foil and gladwrap.

Place these items in the unit: Flasks (three is a good number), seed (in phial), or green pod, cup



with 10% bleach solution, eye dropper, knife for green pod, sponge, glass and small cloth for dry seed.

Now that you have all items sterilised and placed in the unit take a can of Glen 20 Bacterial Spray and spray inside the unit. Place lid on and spray around outside concentrating around armholes. Let stand for about five minutes. Now put your rubber gloves and rubber sleeves on. Wash gloves and sleeves in sterilising solution , place arms through holes and commence sowing as listed in the seed section, not forgetting to seal flasks before opening lid. Now that you have finished take flask and swirl gently to spread seed over media. Now place flask in a warm light place or under a fluoro light if possible. I kept my first flask on top of a kitchen cupboard that had plenty of light. Now comes the last ingredient *patience* and remember you can not take any short cuts because what you are about to see in approximately 15 days (for most seed) is well worth the extra effort.

Conclusion. Please remember if you have a nice species it is just as worthwhile to set a pod to sow and to help keep that species in circulation so future orchid lovers and growers can benefit from our small efforts. But by all means if you would like to try to hybridise do so but make it a worthwhile one to improve on both parents.

I hope this paper will be of some help to any orchid grower who looks forward to those first flasks and if you don't succeed this first time please try again.

NSW SIXTH REGIONAL CONFERENCE

Red revolution at Wauchope

Mr. Harry Klose is to proclaim "The red revolution — a story about Karl Marx, Trotsky, Stalin, and many other red fellows" in his talk at the NSW Sixth Regional Orchid Conference to be held at Wauchope on October 2, 3 and 4th next. We suspect that the "red fellows" are not hostile Indians and that the "red revolution" is one you'll be very interested to learn about.

The Hastings River Orchid Society is lining up heaps of other interesting items for the Conference, too. Dr. Andree Millar will be speaking on the judging of New Guinea orchids. The Conference will be worth visiting for that alone. You'll get solid facts from Andree, with more than a smattering of good humour.

Other top liners include Mark Clements of Canberra Botanic Gardens, world famous for his work on terrestrial orchids; Steve Clemesha speaking on *Dendrobium speciosum* and *D. gracillimum;* Bill and Jean Cannons on the breeding of cattleyas and native hybrids; Ted Gregory on natives, and he's probably our best grower of them all; Ben Wallace of the University of New England on the technical aspects of the growth and culture of orchids.

What a line up!

There's lots more. Top local growers will demonstrate their growing methods. The social programme is exciting and there'll be a superb banquet.

Wauchope is Australia's greatest timber town. On its outskirts is unique Timber Town in which the whole story of timber getting is portrayed, including its colourful history.

Motel and caravan park accommodation has been organised.

Registration fee is not yet determined but it will be low. You can book now and be invoiced later.

Visitors to the Sixth Australian Conference in Brisbane can call in at Wauchope on the way back south. If you cant' get to Brisbane then make sure of getting to Wauchope for three action packed days over the holiday week-end.

Bookings and enquiries should be sent now to: The Secretary, Hastings River Orchid Society, PO Box 193 Wauchope, 2446.

LYCASTE

SEEDLINGS AVAILABLE FROM OUR AWARD AND CHAMPION ORCHIDS.

REPEAT OF FAMOUS MACAMA CROSS $7.50
OTHER CROSSES FROM GOOD PARENTS $6.00
SOME ADVANCED SEEDLINGS $10 to $15

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FLORA CULTURE

"Seeking Perfection"

EQUITANT ONCIDIUMS



ONC. GOLDEN SUNSET 'TAKA'
Owner — J. Woolf



ONC. triquetrum 'RED FANTASY'
Owner — J. Woolf

- These intriguing miniature oncidiums provide a superb display of colourful blooms from a very small area.
- They are particularly suited to small heated or cool (with care) glass houses or in warmer areas in a shade house.
- They are easy to grow, requiring good light, good aeration around roots and regular watering during the warmer months.
- Slab culture on virgin cork hardwood pieces or small limbs off suitable trees is recommended as the plants must dry out between waterings.
- Pot culture is used but they must not stay wet.
- These prolific very colourful orchids reward the grower with flowers quicker, from flask, than any other orchid genera.

The following crosses have just been replated:

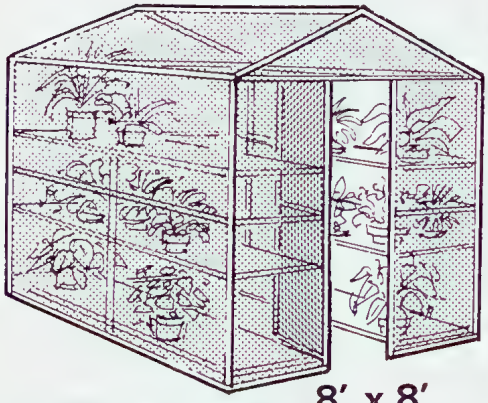
1. ONC. (GOLDEN SUNSET 'TAKA' x triquetrum 'RED FANTASY') — expect some fine reds.
2. ONC. (ANNA ROSA x pulchellum) – This cross should produce pinks through to purple.
3. ONC. (LITTLE SUNSHINE x pulchellum) – Good pinks should result.

Flasks of 5's	(5-7)	$8.50
Flasks of 10's	(10-12)	$12.50

Freight and packaging is extra (at cost) send no money with order, just name, address and phone number to:

W. L. HARDGRAVE FLORA CULTURE
PO BOX 5078, TOOWOOMBA, QUEENSLAND 4350.
PHONE: (076) 35 4384

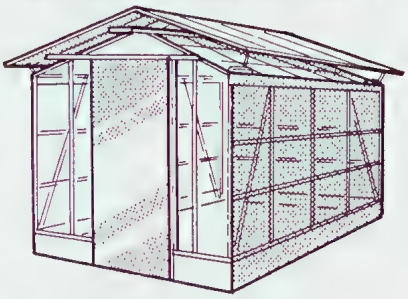
For Laboratory and Meristem Service see December issue. Write for available lists.



YOUR CUTTINGS AND PLANTS WILL BLOSSOM

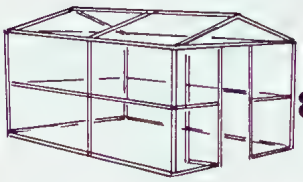
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GLASSHOUSE WITH STEEL DOOR OR PERSPEX DOOR AND PANELS



MODULAR SHADEHOUSE KITS — GABLE ROOF

Standard Widths:
6', 8', 10', 12'
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Multiples of 6 and 8 ft.
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6', 8', 12', 16', 18' and 24'
Non Standard & longer sizes on request.
Other Claddings:
Glass, Fibreglass, Plastic and Birdwire for aviaries.



8' x 8' $362

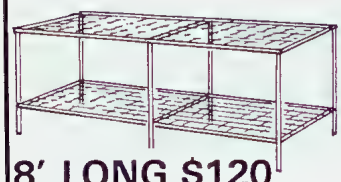
8' x 16' $490



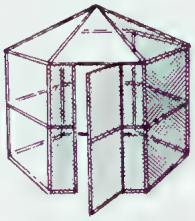
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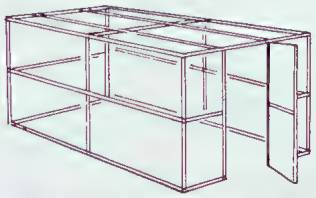
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BOOK REVIEW

Proceedings of the Orchid Symposium at The 13th Botanical Conference

LEN LAWLER

This book is quite unique. How often in a lifetime are so many distinguished orchid scientists from all over the world assembled together in one place? Further, how fortunate there should be an orchid society with the resources and the will to underwrite a symposium wherein they could pass on their knowledge.

Also that the full gist of it should be published for the benefit of all those who would have liked to be present but could not make it.

The book conveys a complete overview of orchidology. The upsurge of interest in orchids in 19th century Europe was due to the import of epiphytic species from the Americas, Africa and Asia. The problems associated with growing tropical orchids in a cool climate were overcome by much patient experiment. There followed the production of interspecific and intergeneric hybrids, but the vast potential of this work could not be realised until careful, time consuming research unlocked the secrets of germination of orchid seed. Professors C. J. Goh and J. Arditti show just how far progress has been made with tissue culture.

There has been, during the last three decades, a quickening of interest in pure research into the botany, physiology, biochemistry and genetics of orchids. In his paper Professor Holttum deals with some aspects of past research and makes projections for the future.

Given an understanding of fundamental research growers will produce better orchids. Several papers cover this theme. Professor Rao of Singapore deals exhaustively with scientific and market research in orchids. Professors Avadhani and Arditti deal with the latest developments in orchid metabolism in a paper on carbon fixation.

Vital to us are the whys and wherefores of conservation, ecology and taxonomy. These are dealt with by Dr Dressler of the Smithsonian Tropical Research Institute and Dr Ayensu of the Smithsonian Institute, Washington.

Two papers by Professor Arditti cover factors that control flowering, how pollination occurs, and what happens to the flower afterwards. Knowledge of such factors can be a great help to the grower. Too often scientist and grower have tended to ignore each other. For mutual benefit their relationship should be as close as the symbiosis of orchid and fungus. This book promotes such understanding.

Symbiosis, incidentally, is penetratingly covered by Dr Warcup and Mr Mark Clements. I was fascinated by the pre-history deductions of Dr Lavarack in his paper on the orchids of Cape York Peninsula. Native growers can learn much from reading it.

The story of West Australia's fascinating underground orchid is the cream of the book. Mr Alex George has been intimately associated with its study and his story of its rediscovery is told here, along with several splendid illustrations.

The papers are illustrated with 28 colour plates. In addition there are many diagrams and tables.

The book demonstrates that scientists can actively encourage growers by disseminating their results in language that can be readily understood by laymen.

I recommend it as an asset to any orchid library.

Proceedings of the Orchid Symposium held in conjunction with the 13th Botanical Congress. Published by the Orchid Society of NSW. Price $10.00, plus $1.50 for packing and postage, surface mail. Send cheque made out to Orchid Society of NSW to Mr Ian Chalmers, 25 Turriell Point Road, Caringbah, NSW, Australia 2229.

WHO'S FOR RESEARCH

Professor Joseph Arditti, writing in the *Bulletin of the Orchid Society of South-East Asia* makes an appeal for the Society to establish a Research Fund. He instances cases where research has had marked economic results, such as: "Approximately 37 years after Knudson did his experiment another American, Professor E. A. Ball in North Carolina, placed an excised shoot tip on an agar medium for the only purpose of watching it grow. His research had absolutely no practical prospects at the time. This was changed by the French botanist Georges Morel who used Bell's technique to develop shoot tip ('meristem') culture as a means of mass clonal propagation of orchids".

Professor Arditti and Dr. Goh of Singapore University have offered to work one day in a nursery in return for a donation of US$5,000.

Which is a reminder that the Australian Orchid Foundation welcomes all contributions, and because it is a registered research institution they are tax deductible.

We are all in debt to the researchers of the past so how about paying a little to ensure a better future.

HASTINGS & MANNING RIVER ORCHID SOCIETIES

The above societies 3rd Combined Autumn Show held in Taree in 1981 received high praise from all who had the pleasure of viewing. The Societies are well advanced with plans to hold the 4th Combined Show in REEDS FURNITURE, Cnr William and Horton Streets, PORT MACQUARIE on May 20, 21 and 22nd, 1982.

This will be a very big year for The Hastings River Orchid Society who are the hosts for the NSW Regional Conference being held 1st to 5th October, 1982.

VALE

Members of the Ringwood Orchid Society were saddened by the death of their founding President last December. The late Mr Hartley Taylor helped establish the Ringwood society as one of the largest and most progressive suburban societies in Australia. His friend, and current President, Mr Ern Kettle, said of him: "A kind and gentle man who worked all his life with flowers and plants, his loss will not only be felt by us, but by the many gardening friends he made over the journey".

BOOK REVIEW:

The Orchids — Natural history and classification

A Book by Robert L. Dressler

This might well be the most important book on orchids you could ever read.

As a scientist with the Smithsonian Tropical Research Institute Dr. Dressler has built a reputation for thorough research. After working for six years as a botanist at the Missouri Botanical Garden he accepted a post in Panama in 1963 and has worked there ever since. In 1960, in collaboration with Dr Dobson, he carried out a major review of orchid classification. He has written a number of books and many scientific papers on orchids.

He presented a paper at the Orchid Symposium held in conjunction with the 13th Botanical Congress in Sydney last year.

Anyone who is serious about orchids, whether hobby grower or professional botanist, becomes fascinated by the relationships among the more than 20,000 species. At the generic level patterns of evolutionary development become apparent as one's knowledge and comprehension of the family broadens. This is why it is so important to grasp the principles of nomenclature.

There is reasonable order at the generic level and at first we are led to expect it at the higher levels of classification, only to find that while authorities mainly agree on fundamentals they differ vastly on details.

This book is a milestone because in it Dr Dressler gives the clearest overall picture of the Orchid Family available in one volume. He achieves this without esoteric language. A layman can follow him. The occasional technical word is explained in his glossary, and once you have learnt it you realise it saves a sentence.

What is an orchid? After reading the first few pages a novice will never be in doubt for the rest of his or her lifetime.

Why are they so widely distributed? Continental drift over the geological time scale, now scientifically accepted by geologists and biologists, is the answer. Maps show how this could have occurred. Continental drift co-incided with the development of vascular plants. As isolation increased each area developed its own unique species. Present day distribution is covered in this chapter.

A chapter on morphology explains in words and drawings types of growth, variation in anther and stigma shapes, and clever devices for attracting pollinators.

Chapter 4 deals with ecology and its many aspects, including orchid fungus relationships, carbon fixation, epiphytism, and nutrient sources.

Chapter 5 is a long one on the evolution of orchids. The first paragraph in this section summarises the fascination of the whole book. We quote:-

"The Orchidaceae seem to be a family in a state of active evolution. We find 'good' species, semispecies and variable complexes, just as one would expect of a group in active speciation. 'Problem genera' abound, and we find almost diagrammatic phyletic trends within and between groups. While we should not try to derive any living group from any other, we cannot but notice that the family has many seeming links that tie groups together. Disagreements about the classification of subfamilies and tribes within the family are not entirely due to bad taxonomy. One of the interesting things about the family is that we can usually be sure in which 'direction' our phyletic trends are going. At one end we have slightly odd lilies, at the other end, structures that practically transcend the concept of flower, and vegetative habitats that are unique."

And consider this last part of the second paragraph:—

"What seems a good tribal or subtribal feature in one group will differ between closely-related species in another group. This should not be surprising if we believe in evolution. Only in the case of planned, special creation should we expect a neat hierarchy of family, subfamily, tribal, generic and specific features. In such a case, taxonomy would be no challenge, and phylogy non-existent."

Classification is the theme of the sixth chapter. Without it we are lost. Some say that with it we are damned. Dr Dressler puts it in perspective:—

"We sometimes read that classification is purely a matter of opinion. This is clearly absurd, although at times such a view is even expressed by people who claim to be biologists. If we know nothing whatever about a group of plants, then we can pick their classification by Ouija board. As soon as we have any knowledge about the plants, we have some basis for choosing one classification over another. There are cases, of course, where classification *is* a matter of opinion. When there are two distinct but closely allied groups of species, they may be treated as subgenera of a single genus or as two closely allied genera, and neither arrangement does violence to the pattern of relationship. In the classification used here, on the basis of current knowledge the Cryptostylidinae may be treated as a distinct subtribe or an alliance of the Cranichidinae. Similarly, one may treat

the Orchidaceae and the Diseae as two closely related tribes, or as two groups of subtribes within a single, natural tribe. In each case, further materials or more details of flower or pollen structure or some other features might easily change the judgment I have made here.

"We must ask of an author how much evidence he offers, and how consistent it is with the known facts. A classification may be tested by studies of anatomy, cytology and many other aspects of botany. It is this continual testing and checking that gives meaning to systematic botany."

Dr Dressler starts his history of classification with Lindley in 1926. Although Lindley was the first to deal with the Orchidaceae in a comprehensive way,it is a pity there is not a resume of the period from Linnaeus, to de Jussieu, de Candolle, and Robert Brown. Although they cannot be regarded as orchidists their contribution to classification is basic and a few paragraphs on the contributions they made would have been helpful to the non-botanist reader. Otherwise this chapter is superb.

Remaining chapters deal with Subfamilies and Tribes. The distinguishing features of each are summarised and clear drawings show morphological details in enlarged scale.

The penultimate chapter gives keys to Subfamilies, Tribes, and Subtribes. It is virtually a summary of the classifications of previous pages. Thus it is extremely valuable for reference purposes to establish identity at these levels. For generic and species levels it will be necessary to refer to specialised books, but then the latter rarely have much to present on the higher levels of classification.

A final chapter is titled, "What we need to know about orchids". It stresses the great amount of work performed by amateurs, and suggests what a hobby grower can do to help fill the gaps in orchid knowledge.

There is a full list of references, a list of orchid floras, glossary, and comprehensive index, plus 95 glorious photos of orchids in colour.

This book could become recognised as the most important work on orchid classification to be published this century.

The Orchids – Natural History and classification by Robert L. Dressler. Published by Harvard University Press. Available in Australia through bookshops. Australian distributor: Book and Film Services. Artarmon, NSW.

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"The genera and species of orchids show great variation - in size, colour, flower shape, mode of growth and habitat. But they have certain common denominators; they are all monocotyledonous and all perennial herbs." Frances Perry in *Flowers of the World.*

CORAL ANNIVERSARY FOR TASMANIAN OS

Thirty-five years ago in February 1947 the Hobart Orchid Club, later to become the Tasmanian Orchid Society, was formed.

A small group of ten meeting at 105 Colins Street on the third Wednesday of February, elected H. J. Exley as the first President, and A. Cruikshank as Secretary. While the population of Hobart has increased from 55,000 by 300% in 35 years, membership of the Society has grown some 2,000% which to a statistician would indicate a growing interest in orchids and a greater availability of plants.

The Society owes much to its initial officers and to the work of folk like Eric Vince, Len Clark, Chris Nicholas, Phyl Nicholas, Jean Nanscawan, John Longden, Ron Mansfield and Gerry Reid.

Since the 1981 Spring Show the Society has gained 32 new members. There is new blood on the committee too, and there are now four affiliated societies. The next fifteen years look good.

Congratulations Tasmania.

TREATING METHYL BROMIDE FUMIGATION

Mr M. Keith, writing in the Townsville OS Bulletin has this to say about plants treated with Methyl Bromide, a particularly severe fumigation chemical.

Plant material should be well aired after treatment and preferably by placing it in a general flow of air from a small fan for two hours. Plants should be on a small table in a well lit and ventilated room with wet sphagum moss over the roots.

Plants should be potted and placed in a humid atmosphere as soon as possible after aeration to give them a better chance of survival. However, the foliage should not be wet for 24 hours, except to prevent wilting when a mist spray can be used. It is important to remember that plants fumigated with Methyl Bromide should not be placed in bright sunlight or strong winds for at least 48 hours

Some plant material will show an initial reaction to fumigation with Methyl Bromide, which is often manifested as a leaf drop, followed by slight stimulation with a flush of new growth, but this does not greatly affect the material and in most cases it will survive.

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"The most important colour in plants, indeed in the whole world, is the green of chlorophyll. It is this pigment which harnesses sunlight and channels its energy into producing the chemicals and oxygen that provide for all life on earth." J. and S. Proctor in *Plants and Their Flowers.*

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"There is no feeling more pleasurable than that experienced in connection with the breeding of a successful Orchid Cross." Hugo Freed.

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"If the pot is allowed to dry out a little the roots will draw moisture from further afield and bring with it the plant food which is waiting to be used." Ralph Handcock in *You Too Can Grow Orchids.*

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"The colours of everything we see around us are all part of the effect of light." J. and S. Proctor in *Plants and Their Flowers.*

Newsy Items from Tenth World Orchid Conference

Writing for *The Orchid Review* Dr. Phillip Cribb of Kew has this to say:-

"Without doubt the outstanding scientific contribution to the Conference was the paper delivered by Mark Clements from the Canberra Botanic Gardens in Australia. For several years now he has been perfecting the technique of *in vitro* germination of orchid seed, utilising the mycorrhizal fungi associated in nature with each orchid. His success with Australian terrestrial species has been impressive and he showed test tubes full of seedlings successfully grown by this method. He also had considerable success with South African terrestrials and Australian epiphytes using the same technique, and I eagerly anticipate his attempts with European species, particularly *Cypripedium calceolus* which has so far proved intransigent when more usual *in vitro* methods have been attempted. The ease with which he can grow orchids of all sorts is cheering news to those trying to conserve endangered species.

On registration and the International Orchid Commision he has this to say:-

"At the IOC meeting the major item of interest, to my mind, was the concern expressed by many members over delays in orchid registration and the possibility of computerising the operation. Many were surprised that the RHS had been discussing this for some time and had already set in motion a pilot scheme which Jack Greatwood outlined. Hopefully it will not be long before we see a more streamlined registration process in operation. Finally, the IOC adopted a motion to request Kew to revise the genus *Cymbidium*, thereby demonstrating the mutual dependence of the horticultural and scientific sides of the orchid world".

And Ray Bilton on the Conference Show:-

"From the Australian Orchid Council came a fine exhibit of cut flowers which was justly awarded a Silver Medal. As one would expect, the bulk of the exhibit was of cymbidiums, including the interesting peloric flowered *C.* Butterfly 'Dillabirra' which had yellow flowers and red splashed petals. A particularly fine white was Cleos Melody 'Eldorado' with fine large white sepals and petals and beautiful red marked lip. Among the other genera there were some good quality phalaenopsis but the excellence of the lycastes shown was of the very highest order. I believe they were hybrids from Fred Alcorn and were bred from *Lycaste* Auburn through Koolena, etc. They were large flowers of good shape in a whole range of colours, much the same as *Lyc.* Auburn. Many of these rightly won various medal awards. All-in-all a good quality display taking a number of high awards."

Mr. Bilton mentions displays by two Australian nurseries. He was not to know that many of the fine cymbidiums in the AOC display came from the nursery of Alvin Bryant, of the two nursery displays he says:-

"From down under came the exhibit of Adelaide Orchids, another high quality cut flower display composed of both standard cymbidiums and miniature cymbidiums as well as paphiopedilums. On the stand were several prize winners in their classes including *Cym.* Lady Moxham 'Mary' still a fine polychrome, the famous tetraploid *Cym.* Hamsey 'The Globe', *Cym.* Narella 'Jennifer Gail', a nice pink, the well known *Cym.* Levis Duke 'Bella Vista', a very fine green with a suffused and spotted lip. Of the miniatures I especially liked Scotts Sunrise in a range of red, pink and polychrome shades".

"From Valley Orchids of Australia we expected to see some interesting pure colour (albino) types in standard and miniature cymbidiums and we were not disappointed, with many of the notable clones being represented. As expected they took first prize for the albino cymbidium, a beautiful cream — Sleeping Giant 'Tetra Glory'. Of special interest were also their new lines of miniature cymbidiums along the albino pathway.

Wonderful teamwork by Australians

In a letter to A.O.R. Mr P. K. (Dick) Searle mentions the fine work by the folk who put up the AOC exhibit at the Tenth World Orchid Conference. He says, "There must have been at least ten including Frank Slattery who did the spade work unpacking the flowers, lumping the big heavy background pot plants, scrounging staging, etc."

Kevin McFarlane also sent some colourful comments on the Conference. He says, "Frank Slattery was my room mate for most of the journey. We got on like a house on fire. He was trying to curtail my drinking habits and I was trying to get him to put whisky in the drinking water to purify it. Neither of us had much success. Our display was colourful after a lot of scrounging of containers and materials, and it stood up well."

"Hand in Hand with a love for species goes a responsibility for the preservation of temperate and tropical orchids, for as cities and nations grow, the frontiers of nature recede; and along with them many species of orchids perish." *American OS Handbook.*

OS of NSW Awards

ORCHID SOCIETY OF NSW AWARDS

The last NSW Award list appeared in the December 1978 issue, ending at Award No. 987. The Award number, date, name of plant, award granted and name of the owner(s) are given in that order in the list below.

988 30/10/78 *Dendrobium* Ella V. Leaney 'Helen', CC, Mr P. Collin.
989 30/10/78 *Miltonia* Martinette 'June', CC. Mr J. Marks.
990 27/11/78 *Ascocienda* (Honwichai x Medasand) 'Joanne', HCC. Mr H. Sheaves.
991 27/11/78 *Grammatophyllum scriptum* 'Jill', CC. Mr and Mrs W. T. Upton.
992 26/ 2/79 *Blc.* William Stewardt 'Spanish Gold', AD. Mr H. Sheaves.
993 26/ 3/79 *Neolebmannia porpax* 'Deabes', CC. (Syn. *Epidendron* porpax.) Mr R. Deane.
994 25/ 5/79 *Lc.* Little Susie 'Joy', HCC. Lugarno Orchids.
995 28/ 5/79 *Oncidium* River of Gold 'Susan', CC. Mr B. Long.
996 28/ 5/79 *Paphiopedilum* (Kay Ringman x Gwenpur) 'Susan'. Mr W. Hughes.
997 6/ 6/79 *Cymbidium* Cheri Lyn 'Swansea', AM. Mr T. Price.
998 6/ 6/79 *Slc.* Pearl Spencer 'Petite Rouge', AD. Eldorado Orchids.
999 24/ 6/79 *Paphiopedilum* Fidelity 'Chiffin', HCC. Mr W. Hughes.
1000 24/ 6/79 *Paphiopedilum* Ayjay 'June', HCC. Mr P. Crutchley.
1001 24/ 6/79 *Paphiopedilum* Danella 'Chilton', AM. Mr S. Condon.
1002 24/ 6/79 *Vanda* (Beebe Simmer x Thospol) 'Macksville', AD. Mr J. Bygrove.
1003 14/ 7/79 *Paphiopedilum* Amandahill 'June', HCC. Mr P. Crutchley.
1004 30/ 7/79 *Ascocenda* Araya 'Dianne', HCC. Mr Gordon Cox.
1005 30/ 7/79 *Paphiopedilum* Personella 'June', AM. Mr P. Crutchley.
1006 19/ 8/79 *Paphiopedilum* Tangold 'Delight', HCC. Mr W. Hughes.
1007 27/ 8/79 *Cattleya* Tiffen Bells 'Orchidglade', AM. Mr and Mrs G. Bromley.
1008 27/ 8/79 *Cymbidium* Wakakusa 'N.B.', AM. A novelty cymbidium owned by Mr R. C. Miller.
1009 27/ 8/79 *Paphiopedilum* Marlborough 'Moorilla' HCC. Mr J. L. Marks.
1010 16/ 9/79 *Lc.* Chit Chat 'Tangerine', AD. Lugarno Orchids.
1011 16/ 9/79 *Dendrobium* Bardo Rose 'Teresa', HCC. Mr C. Brandon.
1012 16/ 9/79 *Dendrobium speciosum* 'National White, HCC. Mr C. Brandon.
1013 16/ 9/79 *Dendrobium kingianum* 'Bungan Castle', AM. Mr E. Webeck.
1014 16/ 9/79 Cultural Certificate to Mr Webeck for above plant.
1015 20/ 9/79 *Cymbidium* Malana 'Mem. Caroline Hargreaves', Export Award. Mr R. Battye.
1016 4/10/79 *Cymbidium* Seacrest 'Valya', Export Award. Mrs B. Ball.
1017 4/10/79 *Sarcochilus hartmannii* 'Kerri', AM. Mr J. Williams.
1018 8/10/79 *Scuticaria hadwenii* 'Splendens', AM. Mr J. Jannese.
1019 8/10/79 *Lycaste* Shoalhaven 'Arwon', CC. Mr J. B. Apperley.
1020 29/10/79 *Odontoglossum* Stropheon x O. Dauphin 'Shoalhaven', HCC. Mr J. B. Apperley.
1021 29/10/79 *Paphiopedilum haynaldianum* 'Moorilla', HCC. Mr J. Marks.
1022 29/10/79 *Dendrobium pierardii* 'Fred', CC. Eldorado Orchids.
1023 10/ 9/79 *Dendrobium canaliculatum* 'Sandra Maree' CC. and Mr D. Capner.
1024 31/ 3/80 *Dendrobium* (Paleface x Seafoam) 'Lauren Michelle', CC. Mr R. J. Montgomery. Provisional.
1025 31/ 3/80 *Lc.* Maria Ozzella 'Black Watch', AD. Mr R. J. Montgomery.
1026 9/ 5/80 *Paphiopedilum* Jackie Grahame 'Bambara', HCC. Mr S. Condon.
1027 26/ 5/80 *Paphiopedilum* Beautiful World 'Moorilla', HCC. Mr J. Marks.
1028 9/ 6/80 *Paphiopedilum* Amandahill 'Lookout', HCC. Mr S. Condon.
1029 22/ 6/80 *Paphiopedilum* Colonist 'Reflection', HCC. Mr S. Condon.
1030 22/ 6/80 *Paphiopedilum* Rosepoint 'Beecroft', HCC. Mr S. Condon.
1031 22/ 6/80 *Lc.* Bullion 'Dundas', HCC. Mr H. E. Sheaves.
1032 22/ 6/80 *Zygopetalum* Artur Elle 'Aranel', AD. Mr R. Gifford.
1033 28/ 7/80 *Paphiopedilum* Personality 'Songstaff', HCC. Mr S. Condon.
1034 17/ 8/80 *Cymbidium* Norina 'Joy', CC. Mr L. Robertson.
1035 17/ 8/80 *Cymbidium* Gina Maguard 'Jennifer', HCC. Mr B. C. Schwartz.
1036 17/ 8/80 *Cymbidium* Valerie Brown 'Westfield', HCC. Mr and Mrs A. L. Brown.
1037 17/ 8/80 *Cymbidium* Pacific Rose 'Swansea', Export Award. Mr T. Price.
1038 17/ 8/80 *Cymbidium* Prima Donna 'Mona Vale', Export Award. Mr R. Battye.
1039 14/ 9/80 *Cymbidium* Sensation 'Aminya', CC. Mr and Mrs L. Perry.
1040 14/ 9/80 *Paphiopedilum sukhakulii* 'Beecroft', HCC. Mr S. Condon.
1041 14/ 9/80 *Cymbidium* Highland Mist 'Jane', HCC. Mr R. Battye.
1042 14/ 9/80 *Paphiopedilum* Song Bird 'Judy', HCC. Mr S. Condon.
1043 27/ 4/81 *Blc.* Ruth Purvis 'Rhapsody', HCC. Mr and Mrs J. Purvis.
1044 27/ 4/81 *Blc.* Lucky Strike 'Joy', HCC. Mr J. Williams.
1045 27/ 4/81 *Cattleya* Roman Silver 'Caesar', HCC. Mr B. C. Schwartz.
1046 27/ 4/81 *Cattleya* Portiata 'Nellie', HCC. Mr B. C. Schwartz.
1047 27/ 4/81 *Oncidium* Lava Flow 'Jean', HCC. Mr A. Birdsall.
1048 26/ 5/81 *Paphiopedilum tonsum* var. *curtisifolium* 'Splendens', HCC. Mr J. Jannese.
1049 26/ 5/81 *Oncidium* Golden Cloud 'Jacqui', HCC. Mr W. L. Hughes.
1050 15/ 6/81 *Paphiopedilum* Kay Rinaman 'Val', HCC. Mr S. Condon.
1051 28/ 6/81 *Paphiopedilum* Recompense 'Wondabah', HCC. Wondabah Orchids.
1052 28/ 6/81 *Dendrobium* Australian Beauty 'Magnificent', HCC (Provisional. Name subject to registration.) The cross is *D. speciosum* x *D.* Meadie. Mr. K. McFarlane.
1053 Award of Distinction to above plants.
1054 3/ 7/81 *Lycaste virginalis* var. *alba.* 'Snow Queen', AM. Mr P. Duffy.
1055 11/ 7/81 *Cymbidium* Wallamurra 'Jupiter', AM. Wondabah Orchids.
1056 11/ 7/81 *Paphiopedilum charlesworthii* 'Margaret', HCC. Mr G. Banks.

1057	27/ 7/81	*Lycaste* Koolena 'Elva', HCC. Mr A. F. W. Alcorn.
1058	27/ 7/81	*Cymbidium* Palace Pearl 'Marie', Export Award. Mr and Mrs W. Godfrey.
1059	31/ 8/81	*Paphiopedilum* (Braidwood x World Frolic) 'Amanda Jane', HCC. Provisional pending registration. Mr W. Hughes.
1060	16/ 9/81	*Dendrobium striolatum* 'Lesley', HCC. Mr I. Brewster.
1061	20/ 9/81	*Cymbidium* Sensation, AD. A tetraploid mericlone from the clone 'Aminya'. A. P. Duffy Pty. Ltd.
1062	20/ 9/81	*Cymbidium* Sally Alexandra 'Colmaurin, HCC. Mr C. Fraser.
1063	18/ 9/81	*Blc.* Princess Bells 'Bettys Bouquet', AM. Mrs R. Saunders.
1064	7/10/81	*Coelogyne flaccida* 'Mount Ford', CC. Mr A. Mountford.
1065	30/11/81	*Phalaenopsis* Opaline 'Gillian', HCC Mr R. Montgomery.
1066	30/11/81	*Vuylstekeara* Cambria 'Plush', CC Mr R. Montgomery.

REBECCA NORTHERN PRAISES SYMPOSIUM BOOK

In a letter to Mr Bob Bell Mrs Northen praises the book of proceedings at last Year's Orchid Symposium held in conjunction with the 13th Botanical Congress. She says, "I find many things of interest in it, and feel that this symposium must have been one of the best ever. The variety of speakers, and the contents of their papers were certainly excellent. I wish I could have attended.

The proceedings book is reviewed elsewhere in this issue.

VICIOUS ASSAULT ON LEADING GROWER

His many friends in the orchid world were shocked to learn of a knife attack upon Mr Les Cotton while working in his Brisbane shop. Mr Cotton has a high reputation as a barber under vice regal patronage, and as an orchid grower. He and his wife Phyl are hard workers for their societies. Four hours of emergency surgery became necessary as a result of the attack.

After some weeks in hospital Mr Cotton is now on the road to recovery. May it be complete.

MACKAY SILVER JUBILEE

Mackay and District OS Silver Anniversary celebrations take place over the week-end Saturday 1st May and Sunday 2nd May. Private visiting can be arranged for those desiring it on Monday 3rd. At the official dinner on Saturday Dr. Andree Millar OBE will be the guest speaker. Contact the secretary at PO Box776, Mackay, Q'land. 4740, for details. The secretary is Mrs Y Matthews, phone 079 59 8384.

RARE PINK AUSTRALIAN

Last September Mrs Joyce Leydan of the Toowoomba of ANOS found a pink *Sarcochilus falcatus*, reports Mrs Lottie Lehmann. It was a mature plant with four flowers each slightly larger than a ten cent piece.

Only four pink findings have been reported to AOR. On the last occasion a colour photo was reproduced. See issue of September, 1978, page 138.

NORTHERN RIVERS ORCHID SPECIES SOCIETY

Meets second Tuesday of each month at the Red Cross Rooms, Keen St., Lismore at 7.30pm. Mr Fred Graydon is President Mrs Beryl Stephen is secretary, 129 Military Road, Lismore 2480.

Autumn Shows

Queensland Orchid Society The 1982 Autumn Show will be held in the Kelvin Grove High School Auditorium, Friday and Saturday 16th and 17th April, 9am to 9pm, and Sunday 18th 9am to 5pm. Setting up to 8pm Thursday 15th Hon. Secretary, Mr K. H. Bruce, GPO Box 2002, Brisbane 4001.

Brisbane Orchid Society. Annual Charity Show. Zupp's Motors Showrooms, 1310 Logan Road, Mt. Gravatt. Saturday and Sunday, 3rd and 4th April.

Eastern Districts Orchid Society. Guardian Angels Hall, Bay Terrace, Wynnum Central, Saturday and Sunday 27th and 28th March.

Gold Coast Orchid Society. SCWO Hall, Burleigh Heads, Saturday and Sunday 10th and 11th April (Easter).

Toowoomba Orchid Society. Autumn Show. Myer roof-top car park, Margaret St., Toowoomba, in shopping hours, Wednesday 5th May to Saturday 8th May. Hon. Secretary: Dr N. Grundon, PO Box 885, Toowoomba 4350. Society meets fourth Friday except Sept. and Dec., St. James Church Hall, Russell Street. All welcome. Phone: 35 2570.

Overseas Shows

England

British Orchid Growers' Association Show. RHS Old Hall, Westminster, London. Mid March.

British Orchid Council Congress Show. Ranmoor House, Fulwood Road, Sheffield. 17th and 18th April (Sat. and Sun.). Enquiries to Mr S. L. Williams, Springfield House, 433 Sandygate Road, Sheffield 10.

U.S.A.

37th Annual Santa Barbara Show. Earl Warren Showgrounds, 19th-21st March. Secretary: 1096 Patterson, Santa Barbara, Ca. 93111.

Holland

'Floriade' 1982 International Flower Exhibition, from 8th April to 10th October. Special Orchid Exhibition 6th May to 16th May. Enquiries to Mr Fritz Buter, secretary, 1675 ZG Honselersdijk, Holland, Post box 47.

West Germany

Sixth European Orchid Congress, Hamburg, 25th-28th March. Details from Kurt Mewes, Gussae 117, 2,000, Hamburg 67.

AOF APPEALS FOR SPECIES SEED

The Australian Orchid Foundation is in urgent need of species seed for its Seed Bank. This is a practical way to ensure conservation of species. The seed is made available to propagators at a cost of $1 for the first batch and 50¢ for each thereafter. Interested growers should send for list of available seed.

The Foundation appeals to growers to plan ahead and make selfings of species as they flower. Hybrids are NOT required. Paphiopedilum seed is especially requested, also cattleya, laelia, oncidium, dendrobium, vanda, and the rare unusuals.

Seed or green pods should be wrapped in clean paper (never plastic) and sent to the Seed Bank Curator, Mr Graeme Banks, 183 Windsor Road, Northmead, NSW. 2150. Include the name of the species, your name, and date pollinated, and date collected.

These are your main orchid organisations

Each can help you increase the pleasures of growing orchids

There are over 100 orchid societies in Australia and New Zealand. They are all well organised to help members and new-comers enjoy orchid growing. Most meet monthly.

An active social programme ensures opportunities to meet interesting people, particularly through inter-society visits, Regional, State and Australian Conferences. The ultimate is a trip to a World Orchid Conference held every three years.

The Australian Orchid Council is the co-ordinating body for the six State bodies. It arranges an Australian Orchid Conference every two years, standardises judging practice, and is a forum for discussion on general policies. The council maintains a slide programme library for affiliated societies.

Australian Orchid Council

President: Mr F. M. Slattery, 12 Eddystone Road, Bexley, NSW 2207. Phone (020) 50 7985.

Vice-President: Mr R. Martin, 256 Jasper Road, McKinnon, Vic 3204.

Honorary Secretary: Mr G. Banks, 183 Windsor Road, Northmead, NSW 2152.

Honorary Treasurer: Mr R. Deane, 29 Hemers Road, Dural, NSW 2158.

Programme Librarian: Mr G. Woolley, 4 Viewpoint Avenue, Glen Waverley, Vic 3150.

Programme Director: Mr G. McCraith, 107 Roberts Street, Essendon, Vic 3040.

Registrar-General: Mr J. L. Marks, 15 Moorilla Avenue, Carlingford, NSW 2118.

Orchid Society of NSW

Meets last Monday of month at Henley Bowling Club, Crown Street, Henley (on Ryde bus route) at 8pm.

Patron: His excellency Air Marshal Sir James Rowland, K.B.E., D.F.C., A.F.C., Governor of New South Wales.

President: Mr W. T. Upton, 71 Wesley Street, Elanora Heights 2101. Phone: 913 9438.

Honorary Secretary: Miss B. Oldfield, 61 Mountford Avenue, Guildford 2161.

Honorary Treasurer: Mr J. Nicholl, 2 Gibson Road, Mosman, 2088.

Registrar: Mr L. Peaty, 43 Annangrove Road, Kenthurst, 2154. Phone: 654 1471.

Queensland Orchid Society

Meets second Monday in the Senior Citizens Centre, McLachlan Street, Fortitude Valley, Brisbane, at 8pm.

Patron: His excellency Sir James Ramsey C.B.E., D.S.C., Governor of Queensland.

President: Mr Charles Hill. Phone: 36 2016.

Honorary Secretary: Mr K. H. Bruce, GPO Box 2002, GPO, Brisbane 4001.

Honorary Treasurer: Mr Ray Osborne, GPO Box 2002, Brisbane, 4001.

The Victorian Orchid Club

Meets third Monday in month, St. John's Church of England Hall, Toorak Road, Toorak, at 8pm.

Patron: His excellency the Governor of Victoria.

President: Mr R. Hodgins, PO Box 108, Frankston, 3199.

Honorary Secretary: Mrs I. Hutchins, 37 Elliots Street, Mordialloc, 3195. Phone 90 4917.

Honorary Treasurer: Miss M. Ryan, 27 Huntsman Drive, Noble Park. 3174.

The South Australian Orchid Club

Meets at the Australian Mineral Foundation Building, Conyngham Street, Glenside, first Thursday in month at 8pm.

Patron: Sir Edward Hayward, Knight of St. John.

President: Mr M. J. Donhardt, J.P., 16 Glenside Road, Stirling 5152. Phone 339 4364.

Honorary Secretary: Mr D. J. Harris, 36 East Avenue, Black Forest, 5035. Phone 297 7525.

Honorary Treasurer: Mr H. A. Reu, 10 Eucalypt Parade, St. Agnes 5097.

Orchid Society of Western Australia

Meets fourth Friday in month, Institute of Engineers' Hall, 712 Murray Street, West Perth, at 8pm.

Patron: Sir Crawford Nalder, K.B.

President: Mr K. C. Rex, 105 Hayes Avenue, Mt. Yokine 6060. Phone 349 2735.

Honorary Secretary: Mrs L. Dodd, 61 Canavan Crescent, Manning 6152. Phone 450 3472.

Honorary Treasurer: Mrs K. Baylis, 18 Wheyland Street, Willagee, 6156. Phone 337 6210.

The Tasmanian Orchid Society

Meets fourth Monday in month, R.S.L. Rooms, 6 Victoria Street, Hobart, at 7.45 pm.

President: Mr B. G. Reid, Simpsons Bay, Bruny Island 7158.

Honorary Secretary: Mr J. F. Smith, 11 Warren Court, Howrah, 7018.

Honorary Treasurer: Mr C. Nicholas, 7 Kelvin Avenue, Moonah, 7009.

Australian Orchid Foundation

Director: Mr Gerald McCraith, 107 Roberets Street, Essendon, Vic 3040.

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American OS HandBook.

By customer request we are repeating our Christmas Special, with another ten different CATTLEYA SEEDLINGS, which should also be ready to flower in approximately twelve to eighteen months.

A1. **Lc. THORA 'GLADYS' x (Slc. VALLEZAC 'QUANDE' x Blc. MARIE GABRIELLE JENTGES)** — *All shades of Pink with mainly Yellow lips.*

A2. **Lc. BETTY LANE. (Remake), (C. harrisoniana x C. loddigesii) x Lc. Chine Bouton D'or)** — *Good textured, medium size blooms. Mostly Pinks and Yellows.*

A3. **Lc. CHICANERY. (Lc. Goldcrest x C. Aurantiaca) x Self** — *Clusters of small bright Orange blooms. A must in every collection.*

A4. **(C. LODDIGESII x C. HARRISONIANA) x Lc. ANA MARIA DUVEEN** —*Pink to Apricot. Medium sized blooms.*

A5. **Blc. JULIE KELLY x (C. HARRISONIANA x C. LODDIGESII).** — *Medium size Yellows and all shades of Pinks expected.*

A6 **Blc. COMBOYNE. (Bc. Deese Perfection x (C. Belgica x Blc. Normans Bay 'Gothic' AM)** — *Large shapely blooms. Pale to medium Lavender.*

A7. **Slc. DUSTY PINK x Lc. BETTY LANE** — *Medium size blooms. Yellow shading to Pink. Good shape and texture.*

A8. **Blc. ORANGE SHERBERT x C. INTERGLOSSA** — *Expecting some splash petal Yellows with this one.*

A9. **Lc. SOFALA x C. QUEEN SIRIKIT** — *Medium size pale Lavenders.*

A10. **C. QUEEN SIRIKIT x (C. HARRISONIANA x C. LODDIGESII)** — *Long lasting medium size, very pale Pink blooms, perhaps some Whites.*

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Cymbidium Mericlones @ $10.00 Each

RIEVAULX 'COOKSBRIDGE' AM/RHS.
Late flowering, deep lined Pink with 'Vieux Rose' type lip.

PEARL BALKIS 'CHAILEY' AM/RHS
A pure White tetraploid of superb shape. Lip White, spotted with Crimson.

CLARISSE CARLTON 'TOREADOR' AM/RHS.
Intense Rosy Purple flowers with broad Crimson lip.

BURGUNDIAN 'SYDNEY' AM/RHS
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And now for another touch of class with this very attractive large White with its colourful labellum enhanced with a white frilly edge.

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C. SEDLESCOMBE x Lc. EXCELLENCY (Mericlone)	2½" POT	$7.50
Pot. CORAL QUEEN 'BRILLIANT' AM/AJOS	2½" POT	$7.50
Blc. RUTH MIAO LI 'DESTINY'	2½" POT	$7.50
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● **CATTLEYAS**	divisions, seedlings and mericlones including Blc Fortune 'Spellbound' HCC/AOS and Blc Mem. Helen Brown 'Sweet Afton' AM/AOS.
● **ODONTOGLOSSUMS**	mericlones and seedlings including Odbrs Gordon Dillon x Odm uro-skinneri and Oda Boheme x Oda (florispum x Brocade).
● **PHALAENOPSIS**	seedlings including Phal Cathy Owens x Dtps George Moler. Flowering sized plants available.
● **DENDROBIUM**	Hickham Deb 'Walcrest' AM/AOS.
● **ZYGOPETALUM**	intermedium x Blackii 'Negress" AM/RHS.
● **SPECIES**	Warm, intermediate or cool growing plants including Maxillaria nigrescens, Masdevallia coccinea, Paphiopedilums, Coelogynes, Lycaste skinneri and many, many others.
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(We thank all who wrote earlier for their patience and understanding — we are becoming a little better organised with our paper work).

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GRADE B

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Daniel Hill Flamboyant
Valya Craig Sunset

GRADE C

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Anita Robert Mead
Clarisse Chalton Toreador
Etta Barlow Dos Peblos Special
Jean Slattery Nina
Lillian Stewart Coronation
Roserita Jean
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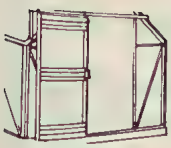
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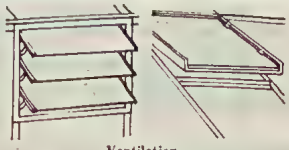
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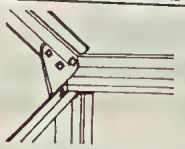
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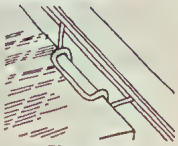
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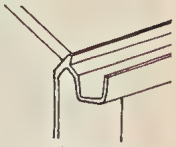
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***4 12D82 receive twelve plants, size D for $120.00 post paid.**

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Stock offered is the latest stock available. However, at times, stocks are too few to list in a general catalogue. Some of these may be included in your order.

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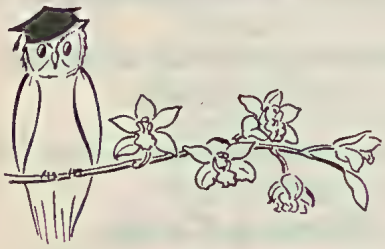
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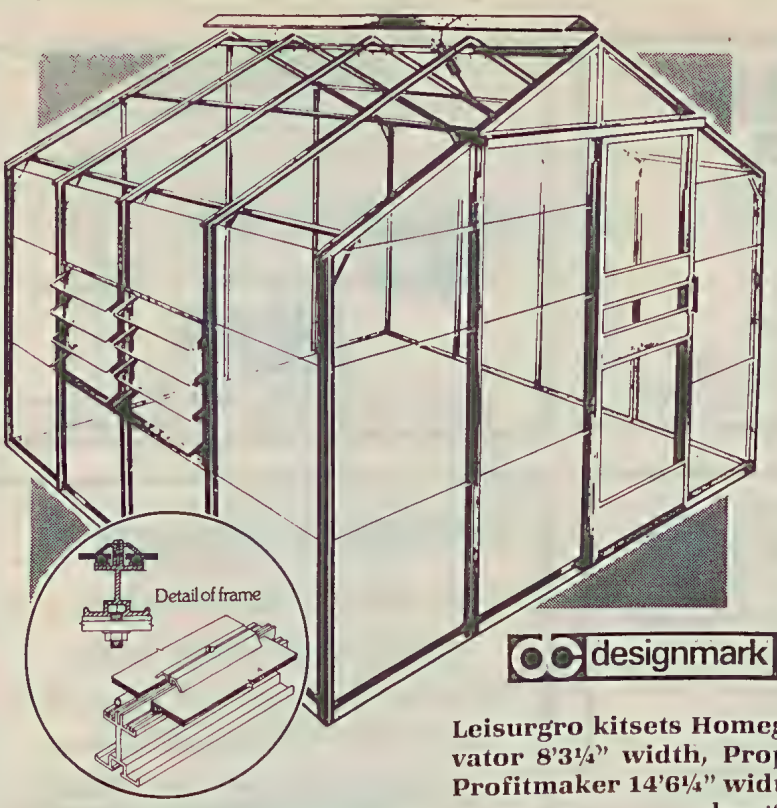
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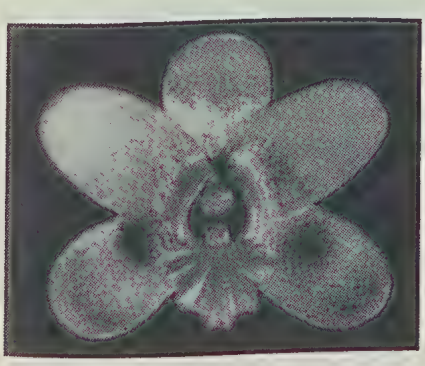
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Notice to Subscribers

We apologise for any inconvenience caused to those subscribers who have sent in their 1982 renewal payments and still receive an account. Due to delay in computerising our renewals were mailed later than expected and many of our regular subscribers were just too keen not to lose any continuity of their copy. Please ignore account if you have RECENTLY paid.

A small percentage of subscribers would also have paid to the end of 1982 having taken advantage of the earlier special offers bringing all subscriptions to a common termination with a December issue.

At the end of current year 1982 general renewal notices will be included within the journal and no accounts mailed.

We take the opportunity to welcome the ever-growing numbers of NEW subscribers to our 'orchid world' and are very happy to be the means of bringing together the knowledge and expertise from the established ranks of orchid lovers to our newer but enthusiastic readers.

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Vol. 47, No. 2 $3.00
June Quarter 1982
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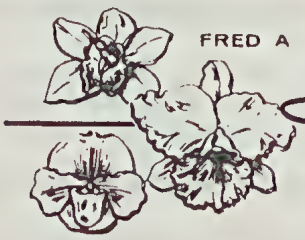
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Our current listings contain OVER 100 MERICLONES, including the following:

Lc. Irene Finney 'York' AM.AOS (Exhibition Lavender)
Lc. Zuiho 'Michi' AM.JOS (White/purple lip)
Slc. Mae Hawkins 'Elizabeth' HCC.AOS (Vivid red)
Slc. Coral Queen 'Brilliant' AM.JOS (Exhibition apricot)
Blc. Ports of Paradise 'Emerald Isle' FCC.AOS (Green)
Pot. Lemon Tree 'Yellow Magic' HCC.AOS (Bright yellow)
Blc. Mem. Helen Brown 'Showpiece' HCC.AOS (Yellow/red in lip)
Slc. Raincombe 'Formosa Beauty' AM.TOS (Splashed petal)

The above are sturdy plants in 2" tubes at $5 each. Plus Freight.

***FIVE LISTS* are issued annually, Posted FREE on request.**
Quantity discounts are available as per listing.
Spring List will be available in August.

All plants are growing under shade cloth without heating.

PROMPT ATTENTION TO MAIL ORDERS.

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BURGUNDIAN 'SYDNEY'. *Polychrome. September.* **$10 each.**
BURGUNDIAN 'BEXLEY'. *Pink. September.* **$10 each.**
HIGHLAND MIST 'LALCHERE'. *White. September.* **$10 each.**
HIGHLAND MIST 'BARRITA'. *Pastel green. September.* **$15 each.**
(+C) MINI SPLENDOUR 'EASTER SHOW'. *Red mini. May.* **$12 each.**
(+C) JOYCE DUNCAN 'SUSAN HUGHES'. *Green. August-September.* **$15 each.**
(+C) SLEEPING NYMPH 'SEACOMBE'. *Pastel green. July.* **$15 each.**
(+C) ARALUEN 'FANTASY'. *Pastel green. August-September.* **$12 each.**
(+C) KALANG 'MAYTIME'. *Pink. May.* **$12 each.**
MALLANA 'MEM. CAROLINE HARGRAVES'. *Yellow. August-September.* **$10 each.**
SUSAN HUGHES 'No. 3'. *Pastel green. September.* **$15 each.**

Buy any eight and receive two bonus mericlone plants. Please include your telephone number when ordering.

NEW OVERSEAS RELEASE

EXCLUSIVE RELEASE FROM SANTA BARBARA ORCHID ESTATE
MERISTEMS OF THE HIGHLY-AWARDED MINIATURE CYMBIDIUM

Crackerjack 'Midnight Magic', AM/AOS, S/CSA, AD/CSA ..... 2" pot $10.00

PHALAENOPSIS MERISTEMS

MPM-12 Phal. Silver Piece 'Paifang' AM/TOS — pale green with red spots and magenta lip ..... 2" pot $72.00
MPM-15 Phal. Paula Hauserman 'Z863' — yellow concolor, good form ..... 2" pot $30.00
MPM-14 Phal. Carnival Queen 'Z812' — good quality yellow, dark red spots ..... 2" pot $18.00
DTPS. Kyoto 'Red Gem' SM/JOGA — 20 bright red flowers per stem ..... 3" pot $12.00
Phal. Carnival 'Takatsu' AM/AJOS — Large, white, heavy spotting ..... 3" pot $14.00
2" pot $10.00

MERISTEMS

Baptistonia (correctly Oncidium) echinata 'Bee' — sprays, yellow and brown ..... 2" pot $8.00
Colm. Sachiko Nagata 'Nagata' BM/JOGA (Odtna. Debutante x Onc. ornithorhynchum) ..... 2" pot $8.00
Wilsonara (Oda. Red Master x Onc. tigrinum) 'OGAKI' — red petals ..... 2" pot $9.00
Odcdm. Autumn Glow 'Leopard' — bright, orange-red spots on lip ..... 2" pot $9.00
EMF-20 Aliceara Maury Island 'Fantasy' HCC/AOS — Meristem ..... 2" pot $9.00
Lc. Rose Mannix 'Kathy' AM-AOS exhibition mauve $8.00
Odbrs. Gordon Dillon 'Charlie' $9.00
L. praestans 'Kokusai' superior clone $8.00
Den. Alice Iwanaga 'Happiness' $9.00
Den. Gold Flush x chrysotoxum F/S long sprays, yellow purple lip, long-lasting large $25.00

PAPHIOPEDILUM NEW SPECIES

Paph. urbaniana from Mindoro, Philippines, single-flowered petals, buff to pink and the tip light spotting pouch mid-brown $21.00
Paph. fowleiei Philippines $32.00

NEW RELEASES FROM OVERSEAS — EXHIBITION PAPHIOPEDILUM — 2" pots

80180 Paph. Gitana 'Joe' x John Hanes 'Oceana' — rose colour, wide petals $4.50
80189 Paph. Merry Bells No. 1 x Ceasar Pitta 'Go Go' — spotted, good form $4.50
80190 Paph. Merry Bells No. 2 x Small World 'Adventure' — spotted, fine form $4.50
80272 Paph. Winston Churchill 'Red Rock' x Red Spendor 'Alta Rojo' — large reds $4.50
80208 Paph. Redvale x Chocolate Mountain 'Mile High' — chocolate browns, good form $4.50
8027 Paph. World Exploit 'Jet Set' HCC/AOS x Diversion 'New Orleans' — a winner $4.50
80364 Paph. Sonoma 'Latin Beauty' AM/AOS x Sarella 'Marsella' — very good form $4.50
9895 World Venture 'Titan' x Personality 'Flarepath' x World Famous dark spot $5.50
80008 Paph. Betty Anderson No. 76-3 x Via Angel Verde — clean greens $4.50
80009 Paph. Carlwin 'Maroon Doll' x Winlantis — large burgundy reds $4.50
80011 Paph. Ceasar Pitta 'Park Place' x Veritlario 'Dusky' spotted, superior form $4.50
80015 Paph. Crowborough Ruby 'Regal' x Valwin 'Pele's Fire' HCC/AOS — new reds $4.50
80048 Paph. Gigi 'Esther Gubler' HCC/AOS x Wineva 'Rock Rose' — rose-red, good form $4.50
80073 Paph. Red Splender 'The Tall One' x Red Flame 'Lacquered Burgundy' — dark reds $4.50
80132 Paph. Via Angel Verde x Tommie Hanes 'Val' AM/AOS — good greens $4.50
80139 Paph. Winlantis 'Alta' x Carlwin 'Maroon Doll' — red-maroons, long stems $4.50
8000 Paph. Bromka 'Margaret' AM/AOS x John Hanes 'Red Star' — good reds $4.50
80018 Paph. Chickadee 'Maybrook' AM/AOS x Red Flame 'Lacquered Burgundy' — red tones $4.50
80049 Paph. Gigi 'Sparkle' HCC/AOS x Dezred 'Universe' — rose-reds, wide petals $4.50
80050 Paph. Girow 'Mars' x Advancement 'Splash of Fire' HCC/AOS — good form wide petals $4.50
80055 Paph. Harbur 'Balthazar' HCC/AOS x Harwin 'Chocolate Drop' — mahogany reds $4.50
80069 Paph. Jim Iverson 'Discovery' x Winlantis 'Alta' — heavy spotted $4.50
80080 Paph. Lonbur 'Voodoo' HCC/AOS x Serendipity No. 73-1 — spotted and red-spotted $4.50
80180 Paph. Veritilario 'Rosy Dawn' x John Hanes 'Red Star' — good reds, medium size $4.50
80151 Paph. Benenden 'C.D.' x Redsand No. 10 — round flowers, brushed tones $4.50
80481/5 Paph. Emerald 'Green Goddess' x Godefroyae 'Bonsall' AM/AOS $5.50
80509 Paph. John Dovan 'Hill Top' x Winston Churchill 'Indomitable' FCC/RHS large flowers spotted — some reds $4.50
81003 Paph. Bettyana 'No. 1' x Bell o'Ireland large clear greens $4.50
81007 Paph. Cardinal Beauty '1116D' x Gilarrow 'Christmas Cheer' large clear reds $4.50
81010 Paph. Crescent Meadows 'Robin Hood' SM/CSA x Van Ness 'Lillian' AM/AOS green-bronze — wide petals $4.50
81014/5 Paph. Freckalies 'Bion' x Susan Tucker 'Sylvia' AM/AOS white complex large flowers some spotting $5.50

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PLEASE ADD 10¢ ON INTERSTATE CHEQUES — GOVERNMENT TAX.
Air Freight Delivered: 12 seedlings, three plants — minimum freight $13.00 all States.
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In the Big Leagues

The two groups of professional baseball players in the US are commonly referred to as the major leagues and the minor leagues.

Major or big leagues draw on the cream of the players and display a consistency of talent that is often deceptive. As many a minor league team has found out the upward transition is usually a rocky road. A similar parallel exists in the orchid world.

Almost anyone can win the "Best Impure-coloured Cymbidium" at the Woollywagga Spring Show, especially if they donated the prize and were the only entrant.

At Featherhill we have never shied away from competing in the big orchid leagues. Our parent and seedling stock has won the highest honours in Europe, England and New Zealand as well as all over the United States.

In the first two months of 1982 we gained **62 awards**, an average of better than one award a day. Local shows? Hardly! Three Awards of Merit from the RHS in January, two Awards of Breeder's Merit from the Cymbidium Society of America and the highest-scoring plant at the 1982 Miami International Show, Lycaste Wyldfire 'Carol Ann', FCC/AOS (92 points). The Miami show is the largest orchid show in the United States.

Must be a huge nursery with unlimited stock to draw from you may think. No, a small nursery of 12,000 square feet. Bob Burkey of the Orchid Advocate calculated that if some of the larger Californian orchid nurseries were to equal this achievement, relative to their acreage, they would have to receive over 3,000 awards a month!

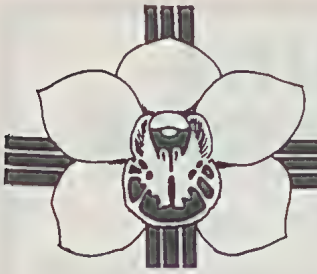
We don't hold back all the good seedlings either. During the same two-month period our customers in the US won over a dozen awards on Featherhill seedlings too.

We specialise in miniature and novelty cymbidiums, high-colour standard cymbidiums and genuine earlies. Long-stemmed paphiopedilums, the odontoglossum alliance and novelty cattleyas with particular emphasis on cool-growing types.

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REPOTTING TIME SALE

HELP! We have lots of advanced mericlones needing repotting soon and have run out of room — many have to go — **YOU** benefit. These are size B mericlones of average size 25 cm plus.

This group $2.90 each or $2.60 each for 5 or more.

Ann Dominic 'St Shirley'
Ann Green 'Graduation Day'
Ann Green 'Golden Girl'
Alexanderi 'Westonbirt'
Cleo Sherman 'Mrs Casamajor'
Desiree A'Logann 'St Edna'
Great Day 'Adelaide'
Liliana 4N
Irish Melody
Mazatlan 'Roma'
Swallow 'Soulangea'
Swallow 'Worrier 1'

This group $3.90 each or $3.50 each for 5 or more.

Acapulco 'Del Mar'
Arabian Nights 'Cooksbridge'
Babylon 'Castle Hill'
Balkis 'Perfection'
Cleo's Melody 'Freakout'
Down's Delight 'Valencia'
Earlyana 'Thompsons'
Great Day 'Sunset'
Juan Cabrillo 'Rex'
Kate Bell 'Wodonga'
Mallana 'Lily May'
Miretta 'A. A. McBean'
Papa Sam 'Penshurst'
Pearl Balkis 'Pink Perfection'
Pharaoh 'Pathfinder'
Valya Craig 'Sutherland'
Warrinyah 'Lillian Winter'
Whyba 'Violacea'

This group $4.90 each or $4.40 each for 5 or more.

Biak 'Warrier'
Big Chief 'Kirrawee'
Doreen Darwen 'Miss Amanda'
Highland Mist 'Caroline'
Lady Moxham 'Mary'
Levis Duke 'Bella Vista'
Mallana 'Mem. Caroline Hargreaves'
Mary Margaret 'Granados'
Poetic 'Andre'
San Francisco 'St Marie'
Sleeping Lamb 'Golden Tetra'
Valley Conquest 'Margaret'

Minimum order 10 plants. Supplied bare root. Sent airmail (priority if possible), for $3 per 10 plants or $9 for 30 plus. Airfreight, or other, by arrangement and at cost.

COLOUR COLLECTION SPECIAL $4.75 EACH.

In March AOR we had an 'introductory' sale. So popular it was, it is being continued — this time it's for **everyone.** With this offer **you** choose your favourites from the current Cymbidium Farm list (about 300 of the best varieties). Choose four reds, or four yellows, or four greens, or four whites, or four any-other-colour, or four miniatures for $19 per four plants. Get any sets, or all sets, or double up. Choose plants with list price $6.50 (more elsewhere). Post $3 per 20 plants.

*Both these offers expire September 30, 1982 and are available only from address above. No further discount except for sizeable orders (see catalogue).

P.S. Those on the mailing list can expect new list early August with as usual many of the latest available varieties, and some surprises, at the usual low prices.

New breakthrough in Orchid Culture Media

We have just perfected our new mother flask and replate media! Our media do not require any adjustment of pH — just weigh the specified amount of powder, add the fruit extract specified and heat to a near boil, pour into flasks or bottles and sterilise. Perfect every time!! Each pound of media makes over 100 mother, or replate flasks (500 ml at 150 cc) at a cost of just pennies each. Our media grows all genera rapidly — Phals. in four months, Cats. in less than six months. Our media also grows cyps, angraecums, cymbidiums, dendrobiums, vandas, odontoglossums, and oncidiums with great speed. The secret is in the buffering — our formulation adds carbon dioxide into the flask which speeds growth by feeding the seedlings like no other media marketed. Also our media requires only six hours of artificial light for maximum speed of growth! This saves those kilowatts and lighting expenses! Both mother flask or replate media (one pound size) costs each $26.50 plus shipping, air $15.00, surface $5.00 U.S. dollars (please allow six weeks for surface delivery by sea). Order 10 pounds in bulk and deduct 30 percent off pound price. We invite distributor inquiries. We also carry a complete line of chemicals for the do-it-yourselfers. Send for our new catalogue of over 100 crosses in flask, and our new seedling listing. We can ship to most areas through the winter season.

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FROM SEEDLINGS TO ADULT SIZE SEEDLINGS AND MERICLONES

Stamped self addressed envelope for list.

MINI-FLASKS

All $10 each

CYMBIDIUM SEEDLINGS

Allow 4 - 6 months from date of order so that flasks can be replated and grown on.

(Minimum of 10 plants per flask)

SOUTHBOROUGH 'GREEN MEADOWS' x POETIC 'ANDRE'
Specifically for fine decorative spikes in green to white. July-September.

LUNAGRAD 'ELANORA' x SUSSEX DAWN 'DOROTHY MAY'
A remake — fine greens are coming from this cross. June-August flowering.

BUNDAH
A remake (Sensation 'Vieux Rose' x Babylon 'Castle Hill') made for dark reds and pinks in September.

CARIGA 'CANARY' x ALNWICK CASTLE 'BRENTWOOD'
A remake of Sovereign Hill — fine yellows have resulted.

LUNAGRAD 'ELANORA' x VIEUX ROSE 'DELL PARK'
Greens, pinks and polychromes should come from this cross.

LUNAGRAD 'ELANORA' x DORAMA 'FAIRFIELD'
This makes Flagstaff Hill — expect mainly greens.

CARIGA 'CANARY' x SUSSEX DAWN 'DOROTHY MAY'
Fine yellows and greens should come from this shapely combination.

SOUTHBOROUGH 'GREEN MEADOWS' x LUNAGRAD 'ELANORA'
Fine decorative greens from June to September.

SOUTHBOROUGH 'GREEN MEADOWS' x SUSSEX DAWN 'DOROTHY MAY'
Fine decorative green diploids. Southborough 'Green Meadows' was the fine diploid used to make the Noarlunga cross which produced the superb Noarlunga 'Enfield' AM/OCSA/AOC.

WHEN ORDERING PLEASE INCLUDE A PHONE NUMBER IF AVAILABLE.

New 1982 Catalogue out now.

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CYMBIDIUM ORCHIDS

FROM $5 — 12 to 20 cm LEAF LENGTH, BULB & LEAD add $5.

OVER 120 TOP-LINE BEAUTIFUL EXPORT QUALITY FLOWERS IN A WIDE RANGE OF BEAUTIFUL COLOURS.

These are the latest showbench varieties. A sampling of orchids available is as follows (for complete list send SAE):

STANDARD CYMBIDIUMS

ANGELICA 'ADVENT' — Lovely export yellow, light spotted lip	Plants $6 and B. & L. available
AMY STUART 'ZITA' — Large, white August bloom	Plants $6 and flasks available
BEXLEY RADIANCE 'BEXLEY' — Early Spring velvety showbench red	Plants $6 and flasks available
BIG CHIEF 'KIRRAWEE' — Lovely July green, red lip, upright spike	Plants $6 and flasks available
DOREEN DARWEN 'MISS AMANDA' — Showbench September white, great form	Plants $8 and flasks available
FUSILIER 'MAN OF KENT' — Vigorous dark pink, August perfect export	Plants $6 and flasks available
HIGHLAND MIST 'CAROLINE' — Top class September apple green, awarded	Plants $8 and flasks available
HIGHLAND MIST 'DILLABIRRA' — September white, dark red spotted lip, erect spike	Plants $6 and flasks available
KHYBER PASS 'ROTUNDA RED' — Lovely very dark pink August flower	Plants $5 and flasks available
LOS ANGELES 'ELVINA' — Good shape and texture, late pink exhibition	Plants $8 and flasks available
MALANA 'CAROLINE HARGREAVES' — Awarded top production September yellow	Plants $8 and flasks available
MARTHA DAENIKER 'STONEHURST' — Export quality pink, upright spike	Plants $6 and flasks available
PEARL BALKIS 'CHAILEY' — 4" crystal white August, show bench bloom.	Plants $6 and flasks available
PEETIE 'STEADFAST' — Huge famous green June flower	Plants $5 available
RUSS MARTIN 'SUZANNE' — Clear August yellow-red barred lip	Plants $5 and flasks available
SAN MIGUEL 'LIMELIGHT' — 5" early June green on upright spike.	Plants $6 and flasks available
SENSATION 'AMINYA' — Intense September red	Plants $8 and flasks available
SENSATION 'MELITA' — September red, show and stud flower	Plants $6 and flasks available
SENSATION 'CHIANTI' — Top red, show winner	Plants $6 and flasks available
SLEEPING BEAUTY 'COLOSSUS' — Beautiful white, August bloom, upright spike	Plants $8 and flasks available
SLEEPING LAMB 'GOLDEN TETRA' — Green August yellow non stain lip-erect	Plants $6 available
SUSAN HUGHES 'JUDITH' — Light green flower, upright spike	Plants $6 and flasks available
SOLANO BEACH — Beautiful light green July export flower.	Plants $6 and flasks available
VIA REAL 'ALEXANDER' — 6" light pink, one of best	Plants $6 and flasks available
WIENA 'CINDY' — Yellow green June/July export flower	Plants $6 and flasks available
WOLLARA 'GOLDEN BALL' — Intense yellow September bloom - show winner	Plants $6 and flasks available
ZUMA BOYD 'MELVA' — 5" pale green-red spotted lip-erect spike	Plants $8 and flasks available

MINIATURE AND NOVELTY CYMBIDIUMS

AMESBURY 'LEVINE' — Lovely green, with broad red spotted lip	Plants $6 and flasks available
DAG 'GREEN JEWEL' — Prolific June/July green, bright red lip	Plants $6 and flasks available
DAG 'DANDY' — 40 deep green September blooms on huge spikes	Plants $6 and flasks available
EIKOH (Japanese) — Lovely July burgundy flower on upright spike	Plants $8 and flasks available
FAIRY WAND 'RUBY WINE' — Dark pink, good shaped August bloom, show	Plants $6 and flasks available
EXCALIBAR 'GALAHAD' — Beautiful good shape pink on upright spike	Plants $6 available
KENNY 'NATO' — Japanese import, mid season pink flower	Plants $8 and flasks available
KENNY 'WINE COLOUR' — Mid season darker pink flower	Plants $8 and flasks available
MIMI 'LUCIFER' — Brilliant late winter red, upright spike	Plants $6 available
MIMI 'SACRAMENTO' — Lovely greenish tan show winner	Plants $6 available
NONNA 'GOLDEN GLADES' — Beautiful bright yellow July flower.	Plants $6 and flasks available
ORIENTAL LEGEND 'CINNAMON' — 20-25 cinnamon blooms on upright spike	Plants $6 and flasks available
PIPETA 'RED' — Beautiful July red	Plants $6 available
PELLEAS 'MONTEREY' — Good shape, pinky red July bloom, upright spike	Plants $6 available
SWEETHEART X AURIGA GRACE — July/August yellow with bold barred lip	Plants $6 available
PUTANA SHOWPIECE — very good shape, pink heavily spotted red lip	Plants $6 available
SUMMER CLOUD X GOWAN DALE — Beautiful pure white show winner	Plants $8 and flasks available
SARAH JEAN 'WONDABAH' — Light green flower, suffused pink lip.	Plants $6 and flasks available
SYLVIA MILLER 'GOLDEN ROD' — Great yellow with spotted red lip	Plants $6 and flasks available
TOM THUMB 'CALLIOPE' — August/September green, broad white lip, red markings	Plants $6 and flasks available
PUMULIUM SENSATION RED BARON — Cherry red July/August flower	Plants $6 and flasks available

FLASKS: Full 25-30 plants $50 — Half flasks 12-15 plants $28. These healthy mericlones are forwarded bare-rooted by air, rail or express mail. MAIL ORDER ONLY: Cash with order — PACKAGING & DELIVERY — AIR MAIL add $9 all states in Australia — (NSW ordinary mail $4). When Air Freight required (send address and phone no.). Freight to be paid on delivery — add $2 handling charge.

THE ORCHID FACTORY
PO BOX 46, BEXLEY, NSW 2207

SUNSHINE ORCHID NURSERY

2034 ROGHAN ROAD, BALD HILLS, BRISBANE 4036
TELEPHONE: (07) 263 4902

UPGRADE YOUR COLLECTION WITH THESE PROVEN QUALITY MERICLONES

MS.439	C. FITZ EUGENE DIXON — *large cluster, lavender*	4½" pots $15.00
MS.588	SLC. JEWEL BOX 'SCHEHERADE' — *dark reds*	4½" pots $15.00
MS.678	SLC. MADGE FORDYCE 'RED ORB'	4½" pots $15.00
MS.1111	BLC. MEDITATION 'AAA' — *large exhibit white*	4½" pots $20.00
MS.948	V. SHIZUKANNO 'HILO' — *large, very dark blue*	4½" pots $15.00
MS.1181	DEN. BETTY HO 'KAMIYA' — *prolific pastel lavender*	3" sq. pots $10.00
MS.1182	DEN. MYRON MOONEY 'OUMAE' — *prolific white*	3" sq. pots $10.00
MS.319	CYM. PATARAK 'SUNRISE' — *cream/pink suffused lips*	7" pots $20.00
MS.320	CYM. VIA. CORTIZ 'BOLD GOLD' — *bright yellow/red lips*	7" pots $20.00
MS.321	CYM. MARY MARGARET GRANADOS. FCC/AOS, GM/CSA — *light green*	7" pots $20.00
MS.93	DEN. PERMOS GLORY — *red lavender, full size*	5½" pots $20.00
MS.908	DEN. YODOGIMI — *creamy yellow with pink tips*	3" sq. pots $10.00
MS.909	DEN. SHINONOME No. 7 — *red lavender with touch of yellow*	4½" pots $15.00
MS.912	DEN. MALONES 'JUPITER' — *large lavender with yellow lip*	5½" pots $20.00
MS.913	DEN. MALONES AM/AJOS — *award shape lavender and yellow*	3" sq. pots $10.00
MS.979	DEN. MALONES 'SYMPHONY' — *lavender/yellow in lip*	4½" pots $15.00
MS.1126	DEN. ORIENTAL PARADISE 'FAIN' — *shades of yellow*	4½" pots $15.00

Orders over $50 take 5% discount — over $100 take 10% discount and over $250 take 15% discount.

(PLEASE SEND 48¢ STAMP FOR OUR FULL LISTING)

WHOLESALE ENQUIRIES

To cater for our many wholesale enquiries we have now increased production, and print a regular wholesale listing.

Bona Fide Trading Nurseries are invited to enquire about availability and special Trade Discounts.

Please Telephone (07) 263 4902, or drop us a line and we will forward our current wholesale listing.

SEE YOU AT THE
SEVENTH AUSTRALIAN ORCHID CONFERENCE
BRISBANE — 23rd to 29th SEPTEMBER, 1982.

WHERE PARENTAGE COUNTS



SYLVANIA 'SONNET' x BALTIC
June flowering
Owner: T. Price

SPECIAL NOTICE

A batch of fine quality pressure sterilisers will be imported shortly on a pre-ordered basis.
Contact nursery for details.

WINTER FLOWERS

Winter flowers of any sort are a scarce commodity. Our cymbidium development programme specialises in seedlings bred to flower in the winter months.



ZUMMA BOYD 'MAGNIFICENT' x SLEEPING BEAUTY 'MYSTIC'
July flowering
Owner: M. Chalmers
(albino carrier)

CHANCE TETRAPLOIDS

The first two flowers in the colour plates show stomatal measurements indicating they are chance tetraploids. The third has yet to be measured. The fourth is one of a small but growing number of new yellow winter flowering tetraploids being gained from our early tetraploid crosses.

All these fine seedlings were hybridised at out nursery where shape, colour and variant flowering time are a prime consideration in our breeding programme.



SLEEPING BEAUTY 'PROPHECY' x SLEEPING GLOW'
Owner: W. Van der Linden
(albino carrier)

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Pictured is Cherilyn 'Swansea', AM (Sylvania 'Sonnet' x Downs Delight 'Trim'), the first Cymbidium in Australia to receive an Award of Merit in June. It is an outstanding clone for both showbench and cut-flower production. It has an excellent growth habit, often carries two spikes per bulb and up to fourteen 12.5 cm blooms on an upright raceme. Judged Best Cymbidium at a number of shows including OSNSW Winter Show June 1981. This clone should be a triploid but we have succeeded in producing seed from it this year. We are NOW taking orders for flasks of seedlings with Cherilyn 'Swansea', AM and two top-breeding clones — EXPECTED DELIVERY WILL BE MARCH 1983.



FLASK A.82
Cherilyn 'Swansea', AM x Pacific Rose 'Swansea'

Pacific Rose 'Swansea' (photo AOR March 1981), is very free-flowering, carries up to sixteen 13 cm blooms and is possibly the best pastel pink export clone available in August. It carries early genes and its progeny previously flowered have had excellent filled-in blooms on straight, good-length racemes. Combined here with Cherilyn 'Swansea', AM. The exciting potential is for large, award-quality blooms on upright racemes. Whites and pinks to flower June-July-August.

PRICE $40 PER FLASK.

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Cherilyn 'Swansea', AM x Terama 'Dawn'

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PRICE $35 PER FLASK.

FLASK C.82
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PRICE $35 PER FLASK.

(Flasks contain 40 to 50 seedlings).

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JUNE QUARTER
Vol. 47 No. 2

• **Editorial Associates:**
QUEENSLAND: Mr Frank Oelkers, 419 Robinson Road, Geebung 4034.
VICTORIA: Mrs I. Hutchins, 37 Elliot Street, Mordialloc, Victoria 3195.
SOUTH AUSTRALIA: Mrs Joan McLean, 7 Clearview Cres, Clearview 5085.
WESTERN AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154.
TASMANIA: Mr Chris Nicholas, 7 Kelvin Ave, Moonah, 7009.
INTERNATIONAL: Mr G. H. Slade.

• **Editor: Ronald Kerr.**

• **Editorial Committee:**
R. KERR, S. WALDIE
G. HANSEN, D. SYMONDS,
R. MILLER

• **Address Editorial to:**
R. KERR, 260 Geoffrey Road
Chittaway Point, NSW 2259
Phone: (043) 88 2605

For subscriptions and advertising please write Elizabeth Lowe, Publication Manager, Australian Orchid Review, 14 McGill Street, Lewisham, NSW, Australia 2049. (Phone 560 6166).

SUBSCRIPTIONS only accepted for full calendar year terminating with the December quarterly issue. Rate within Australia $11.00. Overseas $13.00 or $US16.00. Airmail NZ $16.00 or $US19.00. USA $22.00 or $US26.50. Europe $23.00 or $US28.00.

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Contact these secretaries:
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TASMANIA: Mr J. F. Smith, 11 Warren Court, Howrah 7018. Phone: 44 1555.
NORTHERN TERRITORY: Mr A. McGregor, PO Box 38493, Winnellie, 5789. Phone: 81 8436.

Printed and Published by:
GRAPHIC WORLD
14 McGill St, Lewisham 2049
560 6166

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To comply with the International Code of Botanical Nomenclature the whole of a species name is in *italics* and the second term has no capital. With hybrids only the first term is in *italics*, the second starts with a capital and is not latinised. Generic names used in a non-botanical sense do not have a capital nor are they in italics. In society bulletins and on place cards italics can be indicated by underlining.

COVER STORY

When researching suitable genera for a Vanuatu stamp issue Mr G. Hermon Slade sent specimens to Kew for name checking. Dr Wood and Dr Cribb of Kew found one of them to be a new species. They named it in honour of Mr Slade, a lifetime grower and patron of orchids. Information on the stamp issue will be published in AOR when available.

Dendrobium sladei J. J. Wood & Cribb

A recently described species from Vanuatu

by
J. J. WOOD & P. J. CRIBB

One of the less publicised aspects of the work of Kew is to assist artists working for the Crown Agents in choosing orchids and other plants to be illustrated on the new stamp issues of Commonwealth countries. This also involves checking the botanical accuracy of the illustrations and the identification of the chosen species.

D. sladei J. J. Wood & Cribb was named in honour of Mr Herman Slade, who has lived for several years in Vila on the island of Efate, Vanuatu (formerly the New Hebrides) and has been involved with Kew in choosing the orchids for a new set of Vanuatu stamps. His extensive knowledge of and active interest in promoting the study of the orchids of Papua New Guinea and the Pacific Islands is well known. He noticed that one of the species selected and already illustrated had been misidentified as *D. insigne* (Bl.) Rchb. f. (Section *Dichopus*) on the original artwork. Despite a thorough search for its correct name at Kew this orchid appeared to be a new species in section *Grastidium*. Mr Slade's home in Vila overlooks the type locality where the plant is a common epiphyte on trees near the strand and therefore it seemed doubly appropriate to name this new species in his honour.

Dendrobium sladei J. J. Wood & Cribb in Orchid Review, 90: 14-16 (1982).

A pendent epiphytic *herb* to 2m or more long. *Stems* caespitose, slender, terete, c. 5mm in diameter, almost entirely covered by sheathing leaf bases 1.5-2.5cm long. *Leaves* rigidly coriaceous, distichous, lanceolate, minutely unequally roundly bilobed at apex, 5-11 x 1.5-2.3cm. *Inflorescences* borne opposite the leaves on the apical part of the stem, 2-flowered, c. 4cm long; peduncle abbreviated, to 6mm long, almost entirely covered by pale brown ancipitous bracts 4-5mm long. *Flowers* sweetly scented, ephemeral, large for the section, cream to straw-yellow; lip with purple-red side lobes; column cream, foot with a large orange blotch; pedicel and ovary slender, 1.2cm long. *Sepals* lanceolate, acute, cucullate, laterals oblique and somewhat falcate, 2.5-3 x 0.4-0.6cm; mentum incurved, conical, retuse, 0.5-0.6 x 0.4-0.5cm. *Petals* ligulate-lanceolate, acute, obscurely cucullate, 2.5 x 0.4cm. *Lip* 3-lobed, strongly recurved particularly towards apex, 1.1 x 0.7cm, side lobes erect, narrowly triangular, acute, minutely erose; mid-lobe triangular-ovate, acuminate, margin erose-undulate; disc almost entirely rugose-tuberculate, glabrous at apex of lobes; callus a low median ridge extending from the base and merging just beyond the isthmus of the side and mid lobes, into the papillose median nerve, very papillose and sometimes with a small basal tooth below, becoming rugulose above. *Column* porrect, 4 x 2mm, with short pointed stelidia; foot incurved, 5-6mm long; anther oblong-ovate, obtuse, cucullate, 2 x 1mm; pollinia 4, in 2 unequal halves.

Distribution: Vanuatu, endemic; epiphytic on trees often near the sea; sea level 400m.

Vanuatu: Efate, Parsons Island in Vila Harbour, Dec. 1906, *Everard Im Thurn* 329! (K) & *Everard Im Thurn* 330! (K, holotype); N. E. Efate, Tangueleguele area, July 1971, *P. S. Green* in RSNH 1048! (K, alcohol material only); Efate, Undine Bay, 1974, *H. L. Bregulla* 22! (K, alcohol material only).

D. sladei is one of the largest species in section *Grastidium* and is allied to *D. crassifolium* Schltr. from which it differs in its pendent habit, larger leaves of thinner texture and larger distinctly coloured flowers.

Reference:
Cribb, P. J. & Wood, J. J. in Orchid Review, 90: 14-16 (1982).

Catalogues to hand

Adelaide Orchids. The 1982 catalogue is beautifully presented in full colour. You'll need it just to keep up with the latest in cymbidiums and minicyms. There are some very promising paphiopedilum seedlings on offer too. There is a list of the best range of orchid books available in Australia. Tempting.

Valley Orchids. Another superb all-colour catalogue. Cymbidiums only, but what a range. Includes the new pure-colour minicyms, a strain developed by this nursery. All purchases are freight free.

Nesbitt Nursery. Specialising in Australian terrestrials as dormant bulbs (November to January) and bare root plants (May to July). Cultural notes supplied with list. Send to 18 Cambridge St, Vale Park, South Australia, Aust. 5081. The nursery complies with Endangered Species Regulations.

Aranbeem Orchids. This Queensland nursery issues two full and one supplementary list each year. The list is very comprehensive in hybrids and species of most horticultural genera. Send S.A.E., PO Box 53, Zillmere 4034. Mr Ross Maidment B.Ag.Sc. of this nursery has produced a handy *Basic Guide to Orchid Growing*, for new growers. Price $2.00, plus 50¢ postage and packing.

HERB. HORT. KEW



Dendrobium sladei *J. J. Wood & Cribb*, 1, habit, x 1, *Im Thurn* 330 (K, holotype); 2, flower, x 1½; 3, dorsal sepal, x 1½; 4, lateral sepal and column, x 3; 5, petal, x 1½; 6, labellum, front view, x 6; 7, labellum, side view, x 6; 8, column apex, side view, x 9; 9, column apex, front view, x 9; 10, anther cap, x 9; 11, pollinia, x 9, all from *Bregulla* 22 (K, alcohol material), drawn by Mrs M. E. Church.

How to assess the contents of plant fertilisers

W. R. "Bill" JOHNSON

For the layman, it is not an easy matter to assess the contents of commercial plant fertilisers, whereas before any commercial product is applied to an orchid, both the orchid's requirements and the product's contents should be known. From university tests we now know for instance that (in parts per million), cymbidiums require 100ppm of Nitrogen, 20ppm of Phosphate, and 75ppm of Potassium, etc., but how can those figures be related to the contents as stated on the product packet that is supplied by the manufacturer?

To make a quick comparison is in fact quite easy, and does not require a calculator, or even a mathematical mind. Here's how it is done:

On the packet the manufacturer will specify the total of each and every nutritional element contained in the packet by way of a "percentage" of the whole packet. For instance, the label will say "Total Nitrogen 23.0%, Total Phosphate 4.0% and Total Potassium 18.0%" and so on down the list.

If we were to disregard the manufacturer's dilution recommendation and substitute this for a one gram in one litre of water dilution rate (for the purposes of our check), this would give a total solids content in the litre of water of 1,000 parts per million. The next step is to convert the "total percentage" of each element to a new figure, representing "parts per million".

If, using the above example, we converted 23.0% to 230, and the other two from 4.0% and 18.0% to 40 and 180, by moving the decimal point one place to the right, we now have 230 parts per million of N, 40ppm of P, and 180ppm of K, and so on. By comparing those figures to the known requirements of orchids, we would note that our sample product is too high in all three elements. Our sample is in fact the figures stated on Aquasol (a Hortico product).

So that a check can be made against the known element requirements of most orchid genera (not cattleyas), here is the list:

Nitrogen (N) 100ppm; Phosphate (P) 20ppm; Potassium (K) 75ppm; Magnesium (Mg) 25; Iron (Fe) 8; Calcium (Ca) 50 to 200ppm; Manganese (Mn) 1ppm; Copper (Cu) 0.025ppm; Zinc (Zn) 0.2ppm; Boron (B) 0.025ppm; Molybdenum (Mo) 0.001ppm; Sulphur (S) 10ppm.

There are other elements believed to be used, but these will not usually be supplied. The initials in the brackets are the chemical symbol for the elements' names. These will be specified on the labels in lieu of or with the full element name.

Cattleyas require a different proportion of NPK and Mg, which is 50 N, 20 P, 50 K and 50 Mg. parts per million.

Next time you use, or buy, your favourite plant food, check it against the list above. You could be feeding the wrong material.

If the product you use doesn't specify the contents, don't use it.

Lot 18 Dandenong-Hastings Rd., Cranbourne 3977.

$100 prizes for Native Orchids at Blue Mountains OS Show

The Blue Mountain Orchid Society has a membership extending from Sydney's far western suburbs to all the attractive mountain towns. It meets in the foothills town of Emu Plains, at the Melrose Hall on Great Western Highway, fourth Friday of the month.

The Society has many fine growers of native orchids who, at the 1980 and '81 shows made special efforts to cater for native orchids. Additional classes and prize money at these shows attracted native growers within a radius of 75km.

As a further incentive to native growers the Society conducted last year a native orchid workshop which was very well attended.

At this year's show the incentive to exhibit will be even greater. There is a $100 prize for the Western Region Champion Australian Native Orchid Species. Also a $100 for the Western Region Champion Native Orchid Hybrid.

The Blue Mountians Orchid Society Western Region Spring Show will be held in the Penrith Plaza, Henry St, Penrith, about 65 km west of Sydney. It will be open during shopping hours commencing Monday, 13th September for one week. Setting up is to be on Sunday 12th, with judging to start at 5 pm.

Show schedules may be obtained from the Secretary, Mr Ralf Terbutt, 33 Joanna Street, South Penrith 2750. Phone (047) 36 2230. Also from the President, Mr Michael Wilde, 289 Singles Ridge Road, Winmalee, NSW. 2777.

IPSWICH AIDS BLUE NURSING SERVICE

The Ipswich Orchid Society has donated $150.00 to the Blue Nursing Service. The presentation was made to a representative of the Service at the Society's Autumn Show.

Ipswich Orchid Society is to host the New Zealand Orchid Society at the Seventh Australian Orchid Conference. They will provide any equipment required by the New Zealanders for setting up their display. Plans are also under way to provide special entertainment for the visitors.

The Society meets on the first Wednesday in each month at Humanities Building, cnr. Nicholas and South Sts, Ipswich, at 7.30pm. Visitors are very welcome.

AUSTRALIAN ORCHID FOUNDATION

The AOF Orchid Virus Disease Report, 1981

DR. JULIAN COKER

Dr. Julian D. Coker MB, BS (Hons.), BSc., Dip. Ed. has been appointed to:-
"Study Research and Information of Virus Diseases as they affect Orchids".
This is a complex and world-wide problem that affects and is of interest to all orchid growers. The Directors of the foundation have pleasure in circulating his first report:

Horticultural research is dependent on the available money supply and with orchids being a minor crop economically, compared with food crops and some other ornamentals, limited money and hence limited research results.

Some work has been done in Japan, Germany and Holland over the past year, however, the major contribution has come from the United States, especially from Dr. R. Lawson's and Dr. W. Zettler's groups. Hopefully we are close to a feasible serological test method for orchid virus disease.

Dr. Lawson, together with Dr. Corbett and Mrs. P. Bannigan are doing strain differentiation among isolates of CyMV, whilst Dr. Zettler with Dr. Sheehan and Ms. G. Wisler, have developed a practical method for virus indexation on a large scale.

Serological testing involves an antibody-antigen reaction by a gel diffusion technique, whereby if the virus is present in the cell sap, a line of precipitation will result. Specific orchid virus is repeatedly injected into rabbits, with later the blood being extracted and the antiserum purified and lyophilized for storage. It is reconstituted prior to use. Plants for testing have a small disc punched from an appropriate area, generally a leaf. A radial diffusion technique is used, whereby six wells are punched out around a central well in agar in a petri dish. The antiserum is added to the central well and plant samples to the outer wells and the results read after 24 hours.

Dr. Zettler's group reports that this has been a rapid, inexpensive, reliable and sensitive method for detecting CyMV and TMV-0. It should be noted that since the antibody-antigen reaction is totally specific, only the virus corresponding to the antiserum used will give a positive result.

Indicator plants, *Chenopodium amaranticolour* for TMV-0 and *Cassia occidentalis* for CyMV and electron microscopy are both reliable for detecting virus, but not readily available. Serology, therefore, provides the most practical method for testing either through laboratory services or by making the antiserum available to the individual grower.

In the immediate future we need to:

1. find a source prepared to produce the antisera at a reasonable price, either in Australia or overseas,
2. carry out a research programme on:
   a) the viruses affecting orchids in Australia,
   b) the most appropriate areas for collecting test material,
   c) the time taken for virus to spread through the plant after inoculation,
   d) the incidence of asymptomatic carrier plants,
   e) the feasibility of polyvalent antisera, and
   f) the incidence of virus disease in different genera.

Once these answers are determined, I will make the results available and ascertain which growers and which laboratories would be interested in using serological testing and acting as test centres for the smaller growers without facilities.

In general orchid growers are aware of the undesirability of virus disease and with this diagnostic method now becoming available, every step should be taken to encourage the elimination of virus disease from all orchid collections.

I would like to thank Dr. R. Lawson for his advice regarding current orchid research and Dr. H. Kotz for writing to Drs. Zettler and Sheehan, and for their excellent and comprehensive article on serological testing.

Influential Maribyrnong Orchid Society

Although only recently formed Victoria's Maribyrnong Orchid Society is already as strong as many old established societies. Early on the committee defined its aims and set out to implement them in a practical manner.

First objectives is to encourage, develop and foster a love and appreciation of orchids within the society and friendly participation with kindred bodies.

Second objective was to provide a meeting place and scope for discussion of orchid matters, publish literature, and hold shows.

A library has been established and a monthly bulletin produced. A special sheet on some orchid topic is to be sent with each bulletin. These can be detached and collated for use as a reference source on local culture.

An advisory service is available to members for the asking. A sales table at meetings is a real service to all members. In addition plans to bulk buy plants and growng needs are in hand.

Visit Brisbane in September

P. K. (DICK) SEARLE

Queensland is always an exciting State and Brisbane is its more exciting Capital so why visit it in September, 1982 particularly? Because not only is it the venue for the Commonwealth Games but it is also the place for the Seventh Australian Orchid Conference and the accompanying orchid show. The Queensland Orchid Society's Annual Autumn Show has just been held and the display augured well for the Spring.

Only those affiliated societies in the immediate vicinity of Brisbane participated in the recent show and one can foresee a really good show — possibly the best ever staged in Australia — when the North Queensland societies and their Central Queensland fellows join with overseas groups to try and surpass the locals.

The Conference itself will be of great interest but there is so much to see and enjoy that a registrant can be excused for skipping some of the lectures. The fabulous Gold Coast is only an hour away and its rival the Sunshine Coast very little further. The mountain Garden City of Toowoomba is about the same distance while Tamborine Mountain, Springbrook and O'Reillys are closer. The latter two have really something to offer the orchid lover in Spring.

Tours have been arranged for registrants along with plenty of night entertainment but it is advisable to come a little earlier and see what there is to see. Also stay on after the conference and see the Games.

There is a Post-Conference tour to North Queensland and the Barrier Reef. This will be great but the Eighth Australian Conference will be held at Townsville in 1983. You may prefer to concentrate on South Queensland this year and do North Queensland next year.

So many happenings are on the go in Queensland these days that it takes some time to get the best from them. Many Queenslanders find it hard to keep up.

ACCOMMODATION NO PROBLEM

There is still plenty of accommodation available. It is suspected that Mrs Bev Young cornered the market months ago and she can still offer registrants a good choice.

Conference brochures should be available from your Society Secretary but perhaps you prefer to write to Mrs Tania Tinney, Honorary Secretary, 7th Aust. Orchid Conference, 83 Hebe St., Bardon, Queensland 4065. To save time, which is fast running out, ring her on STD on (07) 36 0679.

SEVENTH CONFERENCE LECTURERS

Details of Conference lecturers and their subjects indicates that this side of the Conference is of world standard.

Mr John Hanes of USA is to speak on breeding red paphiopedilums. Mr Bob Dugger, one of the world's most versatile growers, will discuss the hybrids of the odontoglossum alliance, a subject of great interest to those purchasers of AO Foundation flasks.

Inimitable Professor Rapee Sagarik will present the latest information on the colourful and fascinating hybrids from Thailand nurseries; something warm growers should not miss.

Mr Robert Scully, Chairman of the Eleventh World Orchid Congress Committee, is also presenting a paper.

Local speakers are also top experts. Dr Noel Grundon is an agricultural scientist and orchid grower who has made a study of the effects of sodium on the flowering and growth of cymbidiums. He will present his findings at the Conference.

Mr Kevin McFarlane, a world leader in dendrobium and phalaenopsis, will deal with the effects of selective chemicals in propagation.

Cymbidium growers will be catered for by those experts, Alvin Bryant and Bob Nicolle. Alvin on early flowerers, Bob on pure colour minicyms.

Other lecturers will be Dr "Bill" Lavarack, Mr Milton Carpenter of USA, and a representative of the famous French nursery of Vacherot and LeCoufle.

STAMP SOUVENIR FOR CONFERENCE

To mark the opening of the Seventh Australian Orchid Conference Q.O.S. has arranged with Australia Post for the overprinting of a number of the current issue of pre-stamped envelopes featuring Queensland's Floral Emblem, the 'Cooktown Orchid'.

These will be on sale from 24th September for the duration of the Conference Show, at $1.50 each, post free either in unused condition or cancelled with a pictorial postmark specially designed for the occasion. Bulk orders of 50 or more available at $1.00 each plus $1.00 for the bulk pack and postage.

Orders, accompanied by cash, can be placed with Mrs T. Tinney, 83 Hebe St, Bardon, Queensland, Aust. 4065.

Robert Hooke (1635-1703) looked at a piece of cork under a crude microscope — and become the first man to see plant cells.

Magic in the air

RONALD KERR

The fish, long like a giant garfish, seemed to dash from the water and skid along for twenty metres on its tail.

Smooth blue water shone in the sun. A gentle breeze kissed my face. Across Cleveland Bay huge *Araucaria* pines stood majestically silhouetted along the ridgeline of western Magnetic Island.

Perched high on the ferry's upper deck I felt in tune with all the magic of the world.

That was on a day in 1944 on an all-too-brief leave from my army unit.

Magnetic Island is only forty minutes launch trip from Townsville yet it oozes the spell and smell of the Coral Sea.

I remember walking along the jetty and gaping for the first time at a kapok tree, nearly naked of leaves but laden with large hanging pods, some of them half bursting and exposing brownish fibres.

A small lorry with a couple of benches bolted to its tray proved to be the local bus. People climbed perilously aboard en route to guest houses or weekenders.

I spent the day swimming and relaxing amid a luxury of sea and sand.

Since then I have been fortunate to return twice to Townsville, meet its hospitable orchid folk, and see many of the outstanding collections. Each time I have felt the same magic as on that memorable wartime day.

Gifted with a tropical climate which is seldom marred by bad weather outside the rainy season, the local growers produce a profusion of flowers all the year round. The standard is so high that several growers compete anywhere in the world and win. Recent successes at the Tenth World Orchid Conference prove it.

Townsville is Queensland's number two city, over 1,000km north of Brisbane. Barely two hours away by plane, a little more by more adventurous and therefore more interesting routes. Named after Captain Towns, an early pastoralist on the Burdekin River, it is now a thriving commercial, railway, and shipping centre of over 100,000 people.

Captain Cook sighted Cleveland Bay in June 1770 and named Magnetic Island because he believed its mass affected his compasses.

Behind the modern city centre and landscaped riverside mall the sharp jagged crag of Castle Hill dominates the landscape. A lookout on its 300 metre plus top enables one to survey the whole coastline to the north and south horizons, and on a clear day even pick out distant Palm Island.

Looking west from Cleveland Bay the 1,200 metre Mount Elliott dominates the Leichhardt Range. Further afield is the wonderful old gold town of Charters Towers, itself a stop on the road to mineral rich Mount Isa. Northward lies the tropic lushness of Cairns, and the temperate wonderland. of the Atherton Tableland.

Eastward from Cairns the glories of the Great Barrier Reef can be sampled in a day by the trip to Green Island, a true coral cay.

I'm told that Eighth Australian Orchid Conference Committee has accommodation lined up for over 500 people if needed. Oh that that many could attend and that they could all see and feel the magic of the north as I have seen and felt it.

Yes, there is a powerful magnetic field around Magnetic Island. It is drawing me back.

EIGHTH AUSTRALIAN ORCHID CONFERENCE

The Steering Committee and various Sub-Committees have been working solidly for several months now and a scenario is emerging that will make this North Queensland conference uniquely different from its predecessors.

All the officers are very experienced orchid growers with executive skills, directed to organising a conference all registrants will enjoy. They are:

Chairman	F. Tooth
Vice Chairman	N. Ludwig
Secretary	T. Boon
Assist. Secretary	Mrs K. Greenway
Treasurer	P. Pavia
Assist. Treasurer	K. Otto

There are eight sub-committees as under, with their Chair-persons:

Finance	P. Pavia
Publicity	M. Richards
Hospitality	N. Ludwig
Programme & lectures	R. Robinson
Accommodation & tours	M. Keith
Show	R. Merritt
Catering	L. Verran
Reception	L. Tooth

EXCELLENT ACCOMMODATION ASSURED

Ample accommodation is available at all price levels. Over 500 registrants can be provided for if necessary, Now that accommodation arrangements are tied up this sub-committee is concentrating on arranging local, pre and post tours.

Many fine collections will be available for inspection. Registrants will receive a full list.

So far four top overseas orchid personalities have accepted invitations to lecture.

The American tour operator Leona Bee is contemplating bringing out a group of at least twenty Americans.

AUSTRALIAN ORCHID FOUNDATION

Seed Bank's W.A. terrestrials

The Seed Bank curator currently has good stocks of West Australian terrestrial seed. A list of the W.A. species for which seed is held is given below. Other species seed is also on hand and a full list is available on request from the curator, Mr Graeme Banks, 183 Windsor Road, Northmead, N.S.W. 2152. Please forward a self addressed envelope.

When ordering seed a charge for packing and mailing is made and should be forwarded with your order. This charge is $1.00 for the first species and 50¢ for each additional one. A donation over and above these small prices is always appreciated and will be devoted entirely to the Foundation.

It is advisable to list alternative choices because some stocks can be depleted quickly. See article on raising terrestrial seed.

DONATIONS OF SEED

Many practical conservationists are donating species seed. This helps not only conservation of the species but also the funds of the Australian Orchid Foundation. These funds are invested and the income devoted entirely to orchid projects of a scientific and educational nature.

When pollinating it is an advantage to use pollen from another clone of the same species as this ensures a wider gene pool. However a selfing can also be valuable for its stabilising effect on the progeny.

Seeds of native orchids are urgently needed because of the keen interest of overseas growers. Perhaps the native societies could sponsor a seed project by members this coming season. A big parcel from each society would be a big help to conservation.

AVAILABLE TERRESTRIAL SEED

Diuris emarginata
Drakea sp.
Caleana nigrita
Pterostylis allantoidea, P. recurva, P. vittata var. *viridiflora, P. barbata.*
Thelymitra flexuosa, T. cucullata, T. tigrina, T. fuscolutea, T. mucida, T. crinita.
Prasophyllum macristatchyum, P. grimwadeanum (3 varieties), *P. elatum, P. ovale* var. *triglochin, P. brownii, P. gibbosum, P. hians.*
Lyperanthus forrestii.
Acianthus reniformis var. huegelii.
Caladenia discordea, C. macrostylis, C. filamentosa var. *denticulata, C. patersonii* var. *longacauda, C. latifolia, C. radiata, C. gemmata, C. huegelii* (3 varieties), *C. longiclavata, C. sericea.*
Microtis alba, M. brownii, M. unifolia, M. pulchella (2 varieties).
Elythranthera emarginata.

Propagating terrestrial seed

MARK CLEMENTS

On learning that the Australian Orchid Foundation Seed Bank had stocks of West Australian terrestrial orchid seed available your editor contacted Australia's foremost authority on its propagation, Mr Mark Clements of the National Botanic Gardens.

Work commitments have prevented him from writing a detailed article at this stage, however he has briefly stated the essentials.

Seed should be kept dry and stored in a sealed container in the fridge. It should be well labelled with date of collection, species and origin if possible.

Most amateur growers would find it difficult to propagate symbiotically orchid seed *in vitro* because of lack of facilities. Obviously the major problem is the lack of the fungal isolates about which I have written. I am not prepared, at this time, to release these isolates to the general public. This may change when more of my research is complete.

SCATTER METHOD

If growers wish to scatter seeds around a potted terrestrial they will, in many cases, get germination of a small amount of that seed. The critical points here are that firstly the potted plant must be healthy and growing well in its substrate, and secondly not any species will do. By this I mean, if a person has seed of say *Thelymitra nuda* from Western Australia, he would need to scatter this seed around the base of another *Thelymitra* plant or a *Diuris* plant to have any hope of obtaining germination. The choice of host is important.

ASYMBIOTIC METHOD

If growers have laboratory facilities they may like to try them on medium at half the normal concentration of salts or additives. Some native species can be induced to germinate using this method.

National Botanic Gardens, Canberra

Note. For a comprehensive paper, *The germination of Australian Orchid Seed,* by Mr Clements, see the *Proceedings of the Orchid Symposium* held at the 13th International Botanical Congress. A copy is available at $10.00, plus $2.00 packing and postage, from OS of NSW, Mr I. Chalmers, 25 Turriell Point Road, Caringbah 2229.

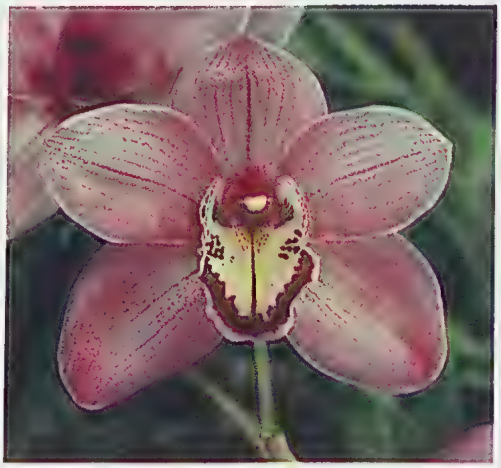
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Progress in Tasmania

After three stirring years, which included the busy period of the Sixth Australian Orchid Conference in Hobart, Mr Gerry Reid has stepped down as President of the Tasmanian Orchid Society. The Society has made solid progress during his term of office.

New President is Mrs Phyl Nicholas. This is a second term for Phyl, who with husband Chris, has been outstanding as a grower and Society administrator over most of the Society's existence. Congratulations Phyl, you have a wonderful team behind you.

On Sunday 2nd May the five Tasmanian societies came together at Ross, which is fairly central, for a general discussion on orchid matters.

Ron Mansfield continues his long tenure as Tasmanian Registrar. Jean Taylor is again Deputy Registrar. A practical revision session for qualified judges is to be held on the 16th June. A practical step was an amendment to the by-laws to allow for the appointment of associate judges from affiliated societies.

As well as a new President the Society has a new Vice-president, Mr Len Fletcher, and a new committee member, Mr Len Cullen.

An interesting programme for months ahead has been planned. It will include visits by two speakers from the mainland.

The Tasmanian Orchid Society meets on the fourth Monday of each month at 7.45pm, in the RSL Rooms, 1st floor, Victoria St, Hobart. Honorary Secretary, Mr J. F. Smith who has held his post solidly for many years may be contacted at 11 Warren Court, Howrah, 7018. Mainland visitors should contact him, or Mrs Nicholas, phone (002) 28 4478, because there is a possibility of a change in the meeting place.

PROFESSOR OAKES AMES ON ROBERT BROWN

"In November 1831, Robert Brown, a renowned British botanist, read before the Linnean Society of London a masterly and epoch-making paper on the sexual structures of orchids. In this paper he cleared away a mass of intellectual cobwebs and announced the discovery of the nucleus — that miracle worker in the realm of heredity; the *sine qua non* of the hybridist's efforts . . . Brown's paper will go down through the ages, rarely read but always significant."

PROFESSOR OAKES AMES ON DARWIN

"In 1862, before the Linnean Society of London, Charles Darwin read a remarkable paper on the sexual forms of *Catasetum*, a genus of the Orchidaceae characterized by extraordinary dimorphism. In the same year his classic treatise on the relation between insects and orchids appeared. This comprehensive work, spiced with conjecture, gave the results of patient observation and not only banished all doubt regarding the function of the pollina, but centred the attention of naturalists upon the complex symbiosis existing between orchids and food-seeking insects.

Redcliffe Autumn Show

Much can be said in favour of staging orchid shows at shopping centres. This was borne out at the Redcliffe and District Orchid Society's Annual Autumn Show in the mall of the Kippa-Ring Shopping Centre.

Members of the public were able to enjoy the fine display. There is no doubt that many new members were signed up, as the well-manned information table was always very popular.

If the glorious display of hardcane dendrobiums is any indication, the Redcliffe Peninsula is fast becoming the "top" area for this genus.

The Champion Orchid of the Show was won by Mick Carmody's *Vanda* Mem. Madame Liab. *Bc.* Pastoral 'Innocence' exhibited by Ern Patching was awarded Reserve Champion. A free-flowering *Trichoglottis philippinensis* tabled by Mrs G. Scott easily won the Champion Species Award.

The best "Cooktown" that I have ever had the pleasure to see and judge, easily won Champion Specimen and Champion Cookie. Ron Turner, exhibitor of this fine orchid, should be very proud of his growing prowess.

Frank Oelkers, 419 Robinson Road, Geebung 4034

ORCHIDS AT CURRUMBIN SANCTUARY

After some delay due to administrative matters beyond its control the Gold Coast Orchid Society in conjunction with the National Trust of Queensland is proceeding with construction of native orchid display houses at the Currumbin Sanctuary.

The Gold Coast members have devoted a great deal of time to establishing plants for this project and to preparatory work in the Sanctuary. It is intended that the display houses be ready by August, in time for the Seventh Australian Orchid Conference.

Gold Coast President, Mr J. W. Bailes, is a devoted conservationist who is deeply appreciative of the way orchid growers responded to his appeal in 1980 for plants for the Currumbin Sanctuary. Anyone who can further assist should contact the secretary, Mr W. Murphy, PO Box 323, Burleigh Heads, 4220.

ORCHID WORKSHOPS IN MELBOURNE

The Victorian Orchid Club is to hold two workshops at St. John's Church Hall, corner Orrong and Toorak Roads, one on Saturday 5th June and one on Saturday 19th June, starting 9 am through to 5 pm.

Experienced growers will conduct the sessions, covering basic botany, natives, cattleyas, cymbidiums, paphiopedilums, housing, and pest control.

Registrants may bring one plant for repotting at a nominal charge. Potting demonstrations will be a feature.

Cost is $10.00 for each registrant. This fee covers morning and afternoon tea, a light luncheon, and a book of proceedings.

Numbers will be restricted to 250 registrants on each day. At previous workshops in Victoria attendance has run to several hundreds and many have had to be turned away. Intending participants should not delay. Apply immediately to Miss M. Ryan, 85 Holden St., Fitzroy North, 3068.

AUSTRALIAN ORCHID FOUNDATION RESEARCH PROJECT

Nutritional Aspects in the Culture of Cymbidiums

D. G. NICHOLS

An experiment was carried out at the Horticultural Research Institute to examine some of the cultural practices used in Victoria to grow *Cymbidium* orchids. One common practice is to start the plants off in a small container and repot into a larger container at some time during the year. This may have a nutritional benefit in that the plants at re-potting are introduced into a fresh mixture with a new supply of nutrients. If, however, there are sufficient nutrients available at the initial potting then it may be better to start the plants in the larger container right from the start. These days new technology is producing controlled release fertilizers with greatly extended release periods, but even with these there may be some benefit obtained by supplying occasional liquid fertilization to supplement them. Another factor involved in the nutrition of plants is the frequency of watering. With most plants, any reduction below optimum in the availability of water can result in loss of growth. With *Cymbidiums* it is often considered that the frequency of watering should be less than normal but this may not be true provided that the aeration capacity of the growing medium is adequate.

The results of the experiment are as follows: Methods and results — Mericlones (Plate 1) of *Cymbidium* cv. Pharaoh 'Pathfinder', an induced tetraploid, were potted into either 75 mm or 125 mm pots containing a mixture of 4 parts (by volume) pine bark (6 mm grade). 2 parts peanut shell, 1 part brown coal and 1 part coarse sand.

The fertilizer additives were (rates per cubic metre):

3kg Osmocote 18:4.8:8.3 (8-9 months release rate).
2 kg Dolomite
1 kg Micromax

The following treatments were applied:

A. (1) Plants started in 75mm pots (Plate 2) and transplanted into 125mm pots on 25/2/81.
   (2) Plants grown in 125mm pots (Plate 3) throughout the experiment.
B. (1) Liquid fertilizer applied.
   (2) No liquid fertilizer.
C. (1) Irrigated 5 times a week.
   (2) Irrigated 7 times a week.

These treatments were arranged in 2 x 2 x 2 factorial design with 6 replications.

Table 1. Cumulative Growth response of *Cymbidium* cv. Pharaoh 'Pathfinder' due to pot size irrigation frequency and liquid fertilizer treatment.

Container Size	Mean cumulative growth cms/plant			
	24/12	24/2	13/5	7/7
75mm — 125mm	102.0	214.2	355.3	474.6
125mm	127.5	262.7	439.6	564.7
Liquid Fertilizer				
+ LF	114.6	242.7	429.2	570.0
− LF	114.9	234.2	365.8	469.3
Irrigation Frequency				
5 times/week	109.8	221.3	357.8	484.1
7 times/week	119.7	255.5	437.1	555.3
	Difference for 5% level			63.1
	Significance 1% level			84.3

The liquid fertilizer was applied once a week in lieu of one of the irrigations and consisted of the following (rates per litre).

0.5g Ammonium nitrate
0.5g Potassium nitrate
0.1g Mono ammonium phosphate.

The plants were initially transplanted on 9/9/80. They were held in a heated/cooled glasshouse. Growth measurements as total leaf length were made on 24/12/80, 24/2/81, 13/5/81 and 7/7/81.

The cumulative growth responses for each treatment are shown in Table 1. (The initial growth at 9/9/80 is subtracted from the total growth at each date).

The best growth from the date that the treatments were applied to the time of the last measurement was made by plants which were grown in 125 mm pots from the start, which were watered seven times a week and received liquid fertilizer once a week. Plants receiving these treatments are shown in Plate 5. Plants receiving the exact opposite treatments are shown in Plate 4.

The rate of growth at different times of the year is shown in Figure 1. Plants in the 125 mm pot made faster early growth than those in the 75 mm pot. This is probably because the ratio of volume of growing medium to root volume is less in the smaller pot. The difference was maintained right up until the period between May and July when the growth rate of the

Cymbidium Pharaoh 'Pathfinder'

PHOTOGRAPHIC PROGRESS OF GROWTH FROM 9/9/80 TO 30/6/81

Background lines are 10 cm apart.

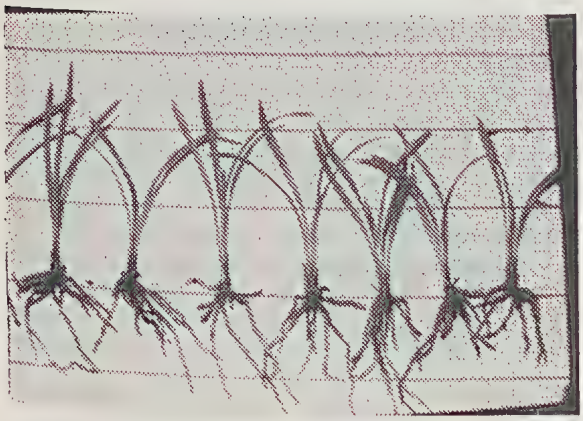


Plate 1. (1/8/80)
Illustrates a fair average of the bare root system of the cymbidium mericlones on their arrival for testing.

Photos: Gerald McCraith



Plate 2. (1/10/80)
Plants growing in 75 mm tubes.

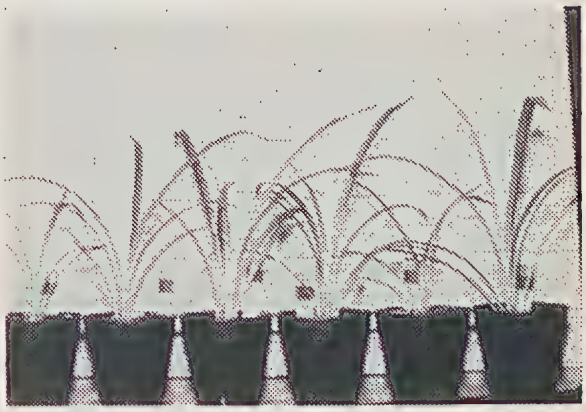


Plate 3. (1/10/80)
Plants growing in 125 mm tubes.



Plates 4. (30/6/81)
The group showing the least results from treatment.

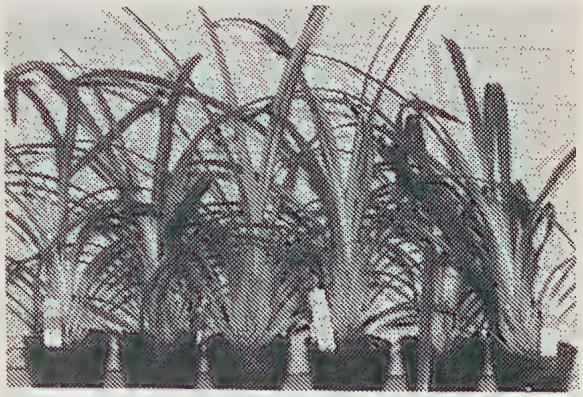


Plate 5. (30/6/81)
The group showing the best results.

transplanted plants began to improve relative to those that were kept in the larger container.

An interesting result was the fact that the benefit of the liquid fertilizer didn't begin to show until after the February measurement. This suggests the osmocote in the growing medium is sufficient to maintain growth up to that time and any additional fertilizer is superfluous. However, the addition of liquid fertilizer after February certainly enhances growth.

There was little difference due to the frequency of irrigation between September and December but from December to May, the loss of two irrigations per week resulted in a considerable loss of growth. However from May to July the growth rate on plants irrigated five days a week improved considerably.

Conclusion

The results of this experiment apply to a single *Cymbidium* tetraploid but growers of Cymbidiums may like to consider the following points that have arisen:

(1) That where modern fertilizing practices are used then the method of holding a plant in a small container and potting on mid way through the year may be harmful in terms of producing growth when compared with potting directly into the larger container.

(2) That a single application per week of liquid fertilizer particularly after February will increase growth even when long term controlled release fertilizers are used in the mixture.

(3) That reducing the frequency of watering will cause a loss of growth in summer.

In general the *Cymbidium* orchid like many other plants responds to a large volume of media in the container, added fertilizers and ample moitsure in the root zone provided the aeration is adequate.

Horticultural Research Institute, Knoxfield.

Notes on AOF Test

W. R. "Bill" JOHNSON

The following excerpts from the Newsletter of the Mornington Peninsula Orchid Society add further to the data in the Australian Orchid Foundation cymbidium culture test report. Mr Johnson has given permission for his comments to be printed in AOR.

The Australian Orchid Foundation has provided the Mornington Orchid Society with a copy of a report on cultural tests on Cymbidium orchids recently concluded. Having read the report and compared the contents with a similar study I have been conducting for the past six years, some comments might prove helpful to members in understanding the report.

Growing Conditions: The growing conditions were a heated and cooled glasshouse, which would give a greater degree of control than that provided by the average grower.

Compost: This was very open, and one of the ingredients was brown coal. This material is being used extensively these days as an ingredient in artificial soils for nurseries. The report does not say what size this was, but I could imagine it would not be fine material.

Fertilisers: I have checked the fertiliser which formed the liquid formula (not the others), and it would seem that this was approximately equal to full strength Aquasol. It is interesting to see the results that have been achieved in view of the total fertiliser material supplied. If the liquid was added to the solid material mixed in with the compost, then the total value of the fertiliser would almost equal double strength Aquasol. That being so, then one would expect an even greater growth rate than was experienced.

One fact that could be interpreted from the report is that the slow release fertiliser used lost its efficiency after four months, whereas it was rated to be efficient for 8 - 9 months. Perhaps this was brought about by more frequent watering than one would give other plants on which this material is used.

Perhaps a study should be done on the efficiency of fertilisers, better still, what would make them more efficient.

Outcome of Report: What is the most important outcome of this study is the fact that the pot size, the coarseness of the compost, and the watering frequency all play a major part in the optimum growth rate of cymbidium orchids. It also indicates that liquid fertilisers are better than the slow release types.

The old recommendation that cymbidiums are best grown in smaller pots has now been discredited, and for that the study has been worthwhile.

Members should also now understand why the Society contributes to the Australian Orchid Foundation from the Show profits. This study alone has been worth every donation we have made.

Lot 18 Dandenong-Hastings Rd, Cranbourne 3977

"I never was more interested in any subject in my life than this of Orchids." Darwin in a letter to Sir Joseph Hooker.

Nutritional experiments of major importance

For nearly four years Mr W. R. Johnson of Glenwood Orchids Pty Ltd has been conducting experiments on orchid nutrition. Though mainly on cymbidiums and cattleyas he has also applied his findings to other genera.

Now he is announcing a unique project to share his knowledge and also benefit the Australian Orchid Foundation. The results are so important that every grower should be aware of them.

Details and results of these tests have been summarised in a ten foolscap page screed written by Mr Johnson. Your editor has read it and would dearly like to publish it. However Mr Johnson has decided that copies are to be sold by himself and the Mornington Peninsula Orchid Society, and the nett proceeds given to the Australian Orchid Foundation.

A WORTHY DECISION

Data in Mr Johnson's screed, titled *A simple nutritional program for orchids*, could be worth thousands of dollars to a large commercial grower, and certainly enhance the pleasures of growing for the hobbyist.

WARNING ON VIRUS SYMPTOMS

One factor not included in the screed is so important that Mr Johnson has expressly asked a warning be published in AOR. It concerns recent cases where symptoms akin to virus have been appearing in collections where seaweed based fertilizer is, or has been used. Mr Johnson has found that an excess of iodine will produce these symptoms. To quote him:

"I am sure that any warning you could give in the AOR would give peace of mind to a large number of orchid growers. It would also serve as a warning that any new product promoted for orchids should be used with care, until carefully tested.

"The experiments indicated that a commonly used fertilizer derived from seaweed was the cause of the problem. Some of the symptoms are almost identical to TMV (Tobacco Mosaic Virus) and it is this which concerns us, because many users of this product are destroying their orchids in the belief that they have virus. Furthermore they are being told that by very experienced commercial growers. That being the case the results of our experience should be made known to avoid any further distress.

"Since completing the initial experiments I have conducted some *in vitro* testing by adding weak seaweed based fertilizer to agar medium and have grown on some mericlone tissue, and some seedlings in a medium containing KI (potassium iodide). In both instances I was able to produce the chlorotic streaking in the leaves of the seedlings and mericlone tissue. This would indicate that the seaweed product might contain iodine in sufficient quantity to cause the reaction. In the light of recent data it is also possible that a cytokinin said to be present in seaweed derivatives could also cause some of the other symptoms, e.g. blistering, or uncontrolled growth areas producing deformities.

"Although only weak seaweed fertiliser was used on our test plants the symptoms were produced in a lot of them. On mature plants the symptoms will not appear, but on the new shoots the symptoms will be most pronounced. It is obvious that the offending ingredient will mostly affect the meristemic area. As the leaves grow a band of the affected area will appear across the leaves and one can virtually see the stop and start of the reaction.

"In the past four months I have surveyed a number of users of seaweed based fertiliser (covering three States) and in each case the same symptoms were appearing on their cymbidiums, and of course they were destroying their plants.

"There would appear to be good reason therefore for a warning that seaweed based fertiliser be used with great care. Information has been provided to manufacturers and the initial response has been that they welcome it and will look into it".

GLENWOOD METHOD IS REALLY SIMPLE

Shortly after Mr Johnson commenced nutritional experiments with the object of establishing optimum growing conditions for his firm, Glenwood Orchids, he read a paper by two American scientists which helped narrow his research. This was first published in the *Journal of the American Society for Horticultural Research*, and later in the July-August, 1979, issue of *The Orchid Advocate*. *AOR* has written for permission to publish this paper. It is titled *Nitrogen, Potassium and Magnesium Nutrition of Three Orchid Genera* by Professor H. A. Poole and Professor G. S. Seeley, of the Department of Floriculture and Ornamental Horticulture at Cornell University. It is more technical than the paper written by Mr Johnson which is expressly aimed at reducing optimum growing technique to its simplest form. No grower can have difficulty applying the methods advocated by Mr Johnson.

You will be doing yourself a favour and helping the Australian Orchid Foundation by sending your request for *A simple liquid nutritional program*

for orchids now. It is worth much more than the small price asked, so why not make it a five or ten dollar cheque and substantially help the Australian Orchid Foundation.

TO OBTAIN YOUR COPY

Send three unused 27¢ stamps plus a stamped addressed 225mm x 100mm (9" x 4") envelope to Glenwood Orchids Pty Ltd. Lot 18, Dandenong-Hastings Road, Cranbourne Rural, Victoria 3977, Australia. Of course the cost of printing the screed must be paid for out of this but 25¢ will be paid to the Australian Orchid Foundation. If anyone sends an extra amount then all of it will go to the Foundation. Overseas folk should send an International Money Order or bank cheque.

BULK ORDERS

Clubs can apply for bulk orders by writing to the Mornington Peninsula Orchid Society, c/o Secretary, Mr Les Smith, 13 Glamis Avenue, Hampton, Victoria 3188.

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NEWCASTLE OS BUS TRIPS

Newcastle Orchid Society has organised three wonderful bus trips for members. The first on Sunday 4th July takes in three nurseries in Sydney's north-western area. Another, on Sunday 1st August visits three in the northern beach suburbs.

Then on Tuesday 21st September (could be a day for sickies) the trip is to the OS of NSW Spring Show at Roselands.

The point is that all these wonderful trips, rich in spring orchids and good fellowship, cost only $7.00 for each person. Each round trip is approximately 300 kilometres. Newcastle growers who aren't in this fine society are recommended to remedy the situation right away. Contact the secretary, Mrs M. Parlour, 2 Killaroo road, Charlestown; or Mr Norm Hellier on 61 2989.

CORRECTION RE AOC AWARDS

Two errors appeared in the list of A.O.C. Awards published in the December, 1981, issue. The first, award no. 336 was to the Adelaide nursery Johnston's Orchids, not Johnson as published. The second award was to the Johnston's Orchids fine HCC plant *Cymbidium* Crackerjack 'Highercombe' (award 343) not 'Highcombe' as published. We apologise for any inconvenience these errors may have caused Johnston's Orchid and Indoor Plant Nurseries.

Q.O.S. 1982 Autumn Orchid Festival

The 'Year of the Tree', was the theme suggested by the Q.O.S. for it's Annual Autumn Festival held 16-18th April, 1982 at Kelvin Grove High School.

Judging by the fantastic display of Dendrobiums that were displayed, the theme chosen should have read 'Year of the Dendrobium'. Thousands of blooms were tabled in all colours.

Kevin McFarlane, hybridist *Extraordinaire*, has been at it again. This time with breath-taking hybrids using *Dendrobium* Tomie 'White' and *Dendrobium* Candy Stripes as parents. It will be very interesting to see what he comes up with at the Conference Show.

Dendrobium Spellbound held us just that way as it dominated and greatly enhanced the Redcliffe's Society's First Prize winning display. This bay-side Society arranged masses of choice dendrobiums and other genera in the shape of a shoe. Naturally, enough Redcliffe chose as theme 'The old lady who lived in the shoe'.

The Native Orchid Society was awarded top marks for its display.

Other genera were determined not to allow the dendrobiums completely steal the show. The Champion Orchid of the Festival was awarded to *Blc.* Mem. Crispin Rosales 'Ruen Yeun', tabled by Vic Miscamble. For Vic it was a very successful Festival as his *Rhv.* Herbert Kurihara was awarded Reserve Champion of the Festival.

The *Blc.* Crispin Rosales was superb. The three mauve blooms were of excellent shape with good texture.

The delightful intergeneric *Rhv.* Herbert Kurihara carried a tall spike of predominantly blue, Vanda-like blooms. The arrangement on the spike was almost perfect — no gaps or twisting.

H. & E. Adams tabled the Champion Specimen — *Cattleya bowringiana* x unknown — a massive plant, growing in a 45cm pot and bearing 104 Portia-like blooms. The Adams' rightly received a C.C.C. for their grand effort.

The Most Pre-eminent Entry - Australian Orchid Council Certificate - was awarded to the 3m high *Dendrobium* Kokoda Trail. E. Thorogood tabled this tall one, much to the admiration of Heaven looking patrons.

Champion Cooktown Orchid was tabled by R. Turner. This is by far the most desirable Cookie I have ever had the pleasure to see.

Oncidium onustum, flowering with upright habit — tabled by L. Grubb, won the Champion Species while Jack Buchanan exhibited six fine Orchids to take out the Individual Growers Award.

WARWICK O.S. AUTUMN SHOW

The Warwick Orchid Society held its first "judged" show in conjunction with the Annual District Show 16-17 April, 1982.

Bill Gleeson tabled the Champion of the Show with *C.* Robert Doig 'Orbicular'. Reserve Champion went to a showy *Dendrobium* Violaceoflush x D. *helix*.

Warwick Society, at the present has not very many members, but after the Warwickites took in this fine display you can bet membership will increase.

ORCHIDS AT THE VORONEZ

R. W. (Bob) NICOLLE

In January of 1981 I received a letter from Jarmila and Miloslav Jelinek of the Ochidee Club of Brno, Czechoslovakia advising me of an international congress to be held at Brno from 8th – 10th May, 1981 in the Voronez Hotel. They had hoped that if I were in Europe at that time, it may be possible to visit the congress to present a paper. As I had no plans for travel in Europe then, I immediately wrote and advised I would make a special trip to Czechoslovakia for the conference.

The capital of Czechoslovakia is Prague and Brno is the second largest city, with a population of 300,000 people. The closest western city to Brno is Vienna and to get to Vienna from Australia it is easiest to fly to Rome. The conference started on Friday 8th May and my Qantas jet arrived in Rome on the afternoon of Tuesday the 5th, allowing me time to take the 1½ hour flight to Genoa en route to visit our Italian distributor, Valco. They have a large nursery at Albenga, on the Italian Riviera, which is 100 kilometres along the coast from Genoa. I was met at the airport by Mr Raffo, the chairman of Valco, who speaks no English at all, but fortunately he had his translator with him. We drove the 100 kilometers to Albenga along the Autostrada dei Fiori (the Road of the Flowers). In my opinion a better name would have been the Road of Tunnels, because in the 100 kilometers there are 111 of them, ranging in length from a few hundred metres to a few kilometres seemingly joined together by bridges.

After paying our toll we drove off the Autostrada into Albenga, the principal vegetable and flower growing area on the Riviera. The climate in Albenga is very similar to Adelaide and glasshouses produce out-of-season vegetables and flowers. In September last year Albenga was hit by a hail-storm which devastated 90% of the glasshouses and has started a massive modernization program. Cymbidiums and paphiopedilums are the main orchids grown and I saw one large glasshouse of over 7,000 square metres containing only miniature and novelty cymbidiums. This grower intends to double his area over the next 12 months. Most of the flowers produced are sold on the Riviera between Cannes and San Remo to the hundreds of thousands of tourists who flock to these warm, Southern resort areas all year round.

Around mid afternoon on Wednesday I was driven 100 kilometres back to Genoa airport by another non-English speaking chauffeur, ending my lightning 24 hour visit to one of the principal orchid growing areas of Italy. From Genoa I flew directly to Frankfurt, passing over the Swiss Alps which were unusually clear of cloud and highlighted by the setting sun. The plane from Frankfurt arrived in Vienna at 11.30 pm on Wednesday, so I took the airport bus to the centre of Vienna and booked into the closest hotel.

It was arranged that I should contact Paul Mattes, the President of the Austrian Orchid Society, who could help me with accommodation in Vienna and perhaps arrange for me to travel with a group of orchid growers by car to Brno, Czechoslovakia. However, when I rang, Paul's wife explained that he was in Indonesia hunting for orchids.

I had previously been advised to take the bus to Brno if unable to arrange a ride with the Austrian group and so as soon as the bus arrived at the bus station I climbed aboard. By 5 pm when it left Vienna I was surprised to find about 20 people were making the trip. Once again nobody spoke any English and there seemed to be conversations in three or four various languages. I was listening carefully to the couple in front of me, trying to work out what they were saying and you can imagine my surprise when I heard them mention my name. On looking over their shoulders, I found that they were reading a list of speakers attending the congress in Brno. I passed them my business card which was quickly passed across the bus and to a man who stood up and turned around, smiled and shouted, "Ah! Mr Nicolle". He was the president of the German Orchid Society and the leader of a party of eight West Germans attending the conference. As he was the only other person on the bus who spoke any English, we sat together to the border. The bus trip takes 3½ hours – two hours in transit and 1½ hours at the border.

As we approached the East German checkpoint at the border, my friend returned to his seat. The West Germans all seemed quite anxious as we approached the border, although some of them had entered Eastern Europe before. Their anxiety was not warranted because it was me who attracted all the attention and at one stage it looked as though I may have to return to Vienna because my documents were not in order. Fortunately the German Orchid Society president was able to explain to the guards the purpose of my visit and after about one hour I was allowed into Czechoslovakia.

We arrived at the bus depot in Brno on time at 8.30 pm, where we were met by Jarmila and Miloslav Jelinek as though we were long lost cousins. After introductions we took cabs a short distance to the new 1,000 bed Voronez Hotel International, the venue for the orchid congress.

The standard at the hotel was equal to that of any

Western International Hotel that I have seen. The huge foyer was dominated by a most interesting orchid display, and the hotel contained a conference theatre with seating for 500 people as well as three excellent restaurants, but the amazing thing was the cost. A bed was the equivalent of one to two dollars per night and a full course meal cost less than one dollar. Beverages were also very cheap; beer from Pilzenski (the town where beer was invented) cost 20¢ a bottle in the restaurant and 10¢ a bottle from vending machines. The only problem I had during my stay in the hotel was with hot water which, because of a pressure problem, was not attainable above the 6th floor in this 10 storey hotel. I should point out that the cheap prices were due to the exchange rate and the local people would have to spend a week's wages to stay one night in the hotel.

At 11.30 pm on Friday night there was a knock at my hotel room door. The caller introduced himself as Professor Dalibor Povolny, from the College of Agriculture in Brno, and explained that he would be my interpreter during my stay. The Professor in his work at the college specialises in Lepidoptera (moths). Although he has never left Czechoslovakia he has done a detailed study on moths in Australia and New Zealand and discovered new species and reclassified many, from specimens supplied by our CSIRO and various Australian museums including South Australia. His works have been published by the Melbourne University Press, sponsored by The Division of Entomology of the CSIRO, and are used as text books for students and research workers throughout the world.

The good professor arranged to meet me at 7 am on Friday to visit the Mendelianum. This museum houses documents and other paraphernalia used by Gregor Mendel (1822-1884), the monk and great natural scientist, best known for his experimental crossings using sweet peas — these were the basis for his revolutionary laws of hereditary which still hold true today. I was particularly moved when I walked into his small garden at the Monastery planted with flowers which illustrate Mendel's basic laws of inheritance.

That same morning, with the other conference registrants, we went on a conducted tour to Olomouc, the town where the annual Czechoslovakian Flower Exhibition is held. This runs for one month and is attended by over two million visitors each year. Workers are brought from the factories by buses for their visit which is considered part of their cultural experience and costs about one week's pay for the vouchers necessary to visit all the pavilions. We had trouble finding a park with our five large buses because we did not arrive until near midday and the 50,000 people already there had parked in all the nearby streets.

Flora Olomouc is run by the City of Olomouc and exhibits are brought in from France, West Germany, Holland, Italy and on this occasion Vietnam. Many exhibits were set up by the Western suppliers, but the most imaginative and artistic had been set up by students from colleges in the City. The quality of flowers and greenery displayed was outstanding, but the cymbidium orchids were very old. The only modern variety I saw was Burgundian 'Sydney'. At a meeting with the organisers of the show they indicated that they too were disappointed with the quality of their Cymbidiums and explained that they had tried to upgrade by importing new varieties from Cuba. Hopefully this show will soon be able to boast top cymbidium varieties from Australia.

Late in the afternoon we began our return trip to Brno along a busy modern highway flanked on each side by fields just turning green after the freezing winter. It was easy to spot hares and pheasants enjoying the late afternoon sunshine. My guide pointed out one of Napoleon's famous battle grounds and also the white chalk cliffs where the remains of sabre-tooth tigers and mammoths are still being discovered.

On the program, Friday evening was described as a social meeting. This simply meant nothing was planned and we sat around in the restaurant talking until near midnight. Nobody left early and everybody was involved in conversation. The visitors from Poland, East Germany, Czechoslovakia and Hungary were all particularly keen to spend some time talking with me, and the evening turned out to be worthwhile and very enjoyable.

Saturday morning 9 o'clock the congress was opened. Lectures began about 10 am and continued through until after 10 pm. There was a one hour break for lunch and most of the lectures lasted between one and two hours. There were speakers from Mexico, Switzerland, Venezuela, Malayasia, Vietnam, various Eastern European countries and, of course, myself from Australia. The standard of the lectures and the quality of the coloured slides used for illustration were outstanding. Even so, I feel that if we had a lecture program anywhere near as long at an Australian conference, there would have been very few people listen to all the speakers. Because the people in Eastern Germany have very little opportunity to hear Western speakers, the lecture theatre was full to the very last lecture of the evening. These continued through Sunday and Sunday evening. I left the hotel on Monday at 6.30 am and was driven back to the bus by the director of the Brno Botanic Gardens. I felt sad as I left knowing that none of the people I met were even likely to have the opportunity of visiting us here in Australia.

Pimpala Rd, Reynella, SA.

Cymbidium Club Seedling of the Year 1981



C. Winter Fair 'Crystal' x C. Fanfare 'St Francis'
Grown by Mr Ron Turtle, a clone from a crossing by Mr Alvin Bryant. Eleven flowers on spike, each 105 mm wide. On the left the spike, below close-up of flower.



This is the second annual award made by the Cymbidium Club of Australia. The winning seedling is chosen by the vote of members from nominated seedlings. Growers wishing to nominate a plant please contact Mr S. Stout, 59 Watkin Street, Bexley, NSW 2207.



Mendel's Law

A photo taken by Mr Bob Nicolle at Mendel's garden in a monastery at Brno, where plants illustrating the laws of hereditary are maintained. Gregor Mendel, a monk, lived from 1822 to 1884 but his discoveries only received recognition this century. They resulted in improved breeding in plants and animals. His laws complement the work of Darwin and their philosophical impact is enormous. See article by Mr Nicolle "Orchids at the Voronez".

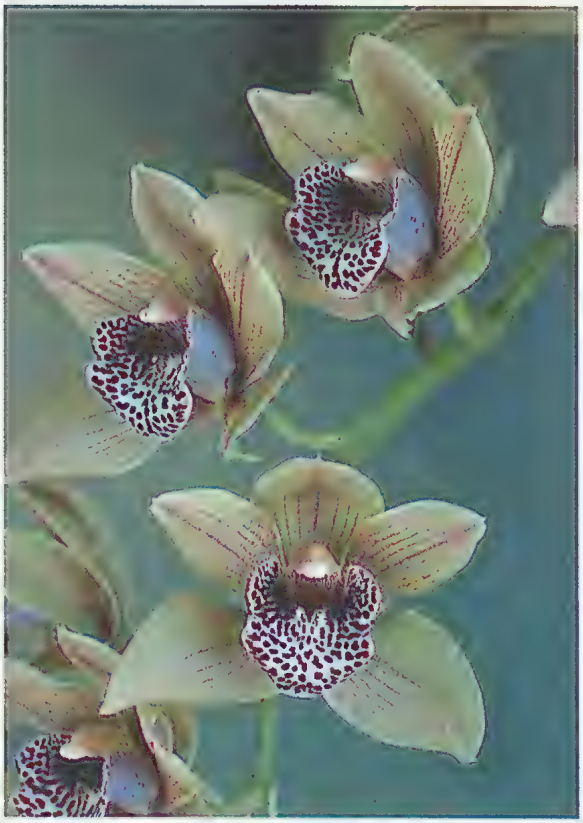
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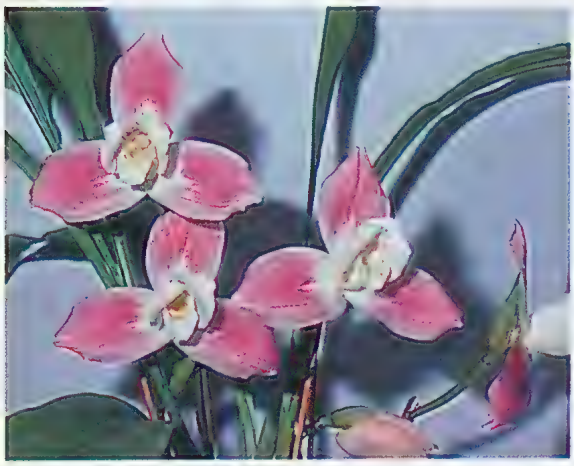
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Lycaste hybrids create world-wide interest







Australian breeding in the genus *Lycaste,* started by the late Mr John Ezzy and Wondabah Orchids, and carried further by Mr John Apperley and Mr Fred Alcorn, has created more than a ripple in world orchid circles. At last this lovely genus is enjoying a deserved popularity. It is easy to grow.

Top: The first three flowerings from a crossing of *Lycaste* Doris May, HCC x *L. mathiasiae.* The latter is a beautiful green species not previously used in hybridising. See Mr Fred Alcorn's article in this issue.

Left: Lycaste Koolena 'Sunset' was awarded a Silver Medal at the Tenth World Orchid Conference. Some outstanding clones have emerged from this cross since it was registered by Wondabah in 1967. Parents are *L.* Auburn and *L. virginalis* (syn. *L. skinneri*).

Right: Lycaste Koolena 'Elva', HCC/NSW. The Koolena cross has been remade at least three times. This clone shows the delicacy of colour found in many of the clones. Shape has been consistently good.

Hybridising, Development and Growing of *Lycaste*

FRED ALCORN

Developments in the last few years have brought the beautiful Lycaste added popularity. Hybridisers have had opportunities to develop colour and shape with very pleasing results, producing new and lovely hybrids.

Whilst species are found from Mexico to South America, most of the Lycaste species are found in the tropical western regions of both countries in mountainous regions. Here they range from a few metres to 2,000 metres and more above sea level in the Andes. Many are from temperate zones where rain falls most of the year, so they cannot tolerate long dry spells. Most of the species in this area hold their leaves for about two years while in the drier regions many are deciduous and flowering begins when new growth develops.

When the hybridiser uses some of the species with the modern hybrids we stand a greater chance of flowering throughout the year. I have flowers nearly every month of the year, but the main flowering period is Spring with a medium supply in Autumn. Most of our hybrids have a good percentage of *L. skinneri* in them resulting in flowers of good texture and size — very useful for the flower trade. We have so far made over seventy crosses.

For successful growing one must realise that they are a cool growing orchid and do not require heat like vandas, phalaenopsis, etc. but prefer conditions such as the paphiopedilums, ondontoglossums, etc. We find seasonal temperatures vary from mid 40°F in Winter to over 90°F in Summer and find it necessary to keep them damp with misting under benches to give good humidity. We are successfully growing *Lycaste* in the bush house but as the leaves are thin they do require heavier shading than cymbidiums during Summer and must be kept well watered and never allowed to dry out.

One of the most important requirements when growing Lycaste, or in fact any orchid, is air circulation. Make sure you have sufficient fans to keep the air moving constantly. During the Summer one can use a cooler to advantage.

POTS AND POTTING — at first we used terra cotta pots but as plastic became more readily available at less cost we switched to plastic. We found no difference in growth whatsoever.

As regards potting back bulbs and new growths, we always wait for the new growth to show roots before potting. If you back cut back bulbs always do it in pairs leaving a back bulb with the growth. Never over pot. As young seedlings grow we pot on progressively to 15 cm.

COMPOST — after many experiments with various mixtures I finally settled for 75% bark, 20% charcoal, 5% coarse sand. This mixture is used for nearly all my orchids. Bark is soaked for several days and dolomite lime is added to reduce the acidity. Size of bark varies with the size of plant. With the smaller plants I add a little peat moss in potting and always make sure of drainage — generally very coarse charcoal in ¼ of the pot. Any substitute can be used providing it gives good drainage.

WATERING — As we grow about 2,000 Lycaste, mainly seedlings, we find overhead watering is best — even those growing outside under sarlon have heavy rain at times. This keeps the plants clean and rarely do they lose a new growth. Our compost is always kept damp with a heavy watering every few weeks in Summer.

FERTILISING — any solubles can be used on growing plants and for flowering plants the nitrogen can be reduced by using one with a higher percentage of potassium.

To keep plants clear of insects the usual sprays will do this plus a fungicide for younger plants. We never use white oil as it tends to burn the leaves.

NEW SPECIES GENES

This year I have flowered the first three seedlings of a cross between *Lycaste* Macama 'Doris May', HCC and the recently discovered *L. mathiasiae*. The latter was only established as a species in 1978 by Dr. George C. Kennedy. See the *Orchid Digest* March-April 1978, pp. 59-61.

L. mathiasiae has apple green segments, with a lighter green and a touch of white in the labellum. It is a nice open flower with wide segments and a height and spread of around 8 cm. Dr Kennedy named it after Dr Mildred Mathias, a distinguished botanist at the University of California.

The high standard of the first three to flower of this cross augurs well for its potential, and also the potential of *L. mathiasiae* as a parent. This adds a mighty extension to the gene pool I have established in this genus.

The Tenth World Orchid Conference showed Australia to be ahead of the world in *Lycaste* breeding. This new extension to the breeding range will help keep us that way.

169 Pennant Hills Rd, Carlingford, Aust. 2188

"Growing Orchids"

Two Books by J. N. Rentoul

For around 30 years Mr. Jim Rentoul has written a monthly article on orchids in the big circulation magazine "Your Garden". He has contributed frequently to world orchid magazines; judged and lectured at innumerable societies; visited countless growers; and grown all the horticultural genera, on a hobby basis, in a very successful way under all conditions.

So there is a deal of experience packed into his two new books. A third is to be published.

Book I is titled *Growing Orchids — Cymbidiums and Slippers.* Book II *Growing Orchids — The Cattleyas and other Epiphytes.*

There are so many outstanding features in both these books that they should assuredly be a part of any orchid library. They contain material of practical value to any orchid grower in the world.

Many excellent colour illustrations create a powerful first impression. Most were photographed by the author. They show the species from which breeding lines derived, and many also demonstrate cultural methods. Numerous black and white photos are devoted to culture.

VITAL FACTOR

The vital factor in both books is the way in which text and illustrations complement each other. Historical and geographical data pertaining to each species and genus, and the hybrids they embrace, is cleverly interwoven with cultural details. This makes for entertaining as well as instructional reading.

The text refers frequently to illustrations and by referring to the index the pictured plant can be found so that a reader unfamiliar with it can fully appreciate its characteristics. A small criticism is that the value of the volumes could be further increased by using the wide side margins of each page to indicate the page number of the appropriate illustration.

BREEDING LINES

The books are given permanent value by their guides to hybrid breeding lines. Thus they are not merely books to read and put on a back shelf, or to borrow for a few weeks from a library. They are books to refer to again and again. The beginner will still learn from them as his experience grows, and the old hand will find them an essential aid to following the breeding lines in Sanders. The compiling of a pedigree chart will prove much more useful when the species mentioned can be checked against appropriate illustrations.

BOOK ONE

Growing Orchids — Cymbidiums and Slippers. The introduction is essential reading for its keynote is history. History is the underlying theme like the warp threads in a fabric, with culture the weft.

A short explanation of the photography techniques used in the book will interest photographers. In the first chapter cymbidiums are introduced and a few terms explained. A chapter on planning the pastime of orchid growing is excellent for its commonsense. This leads naturally to environment and housing.

Following cymbidium chapters cover flowering, hybridising, ploidy, composts, potting, watering, propagating, diseases and pests.

The section on paphiopedilums and phragmipediums covers history, hybridising, and all aspects of culture.

BOOK TWO

Growing Orchids — The Cattleyas and other Epiphytes. This volume embraces the many beautiful horticultural subtribes of the tropical American countries. It starts with details of famous nurseries and collectors, followed by the whole gamut of cultivation techniques. Of immense value are the habitat and climatic factors influencing the orchids of these countries. Thirteen genera are dealt with in considerable detail.

If you are considering automation a chapter on the subject is essential reading.

HIGHLY RECOMMENDED

Nomenclature style conforms to the recommendations of the International Orchid Commission.

One point: Since the owner will be constantly referring to the books, purchase of the better wearing hard cover is suggested.

Book 3 is to deal mainly with Asian orchids. It will be available in a few months time.

In ending Book 2 the author hopes his books will help readers to "grow their orchids better or perhaps to understand where they came from and how they grew in their natural state."

This reviewer feels he has succeeded. Superbly.

Growing Orchids — Book One and Book Two, by J. N. Rentoul. Published by Lothian Publishing Co. Pty Ltd, 4-12 Tattersalls Lane, Melbourne, Vic., Australia 3000. Recommended retail price, each: Hard cover $19.95; limp cover $14.95 Australian currency.

BOOK REVIEW

Orchids of Africa

This book can take its place among the monumental orchid works of the last two hundred years. Fifty superb reproductions of paintings by Esme Hennessy give it this unique status. Mrs Hennessy is a senior lecturer in botany at the University of Durhan-Westville.

The written word by Joyce Stewart ably augments the artwork. Mrs Stewart is a senior lecturer in botany at the University of Natal. She is also a very practical orchid grower and has grown nearly all the illustrated plants.

Although written and illustrated by botanists the book is remarkedly free of unfamiliar botanical terms. It is written for the average orchid grower but botanists will find both text and pictures conform to accepted technical standards.

The text is in large type and spaced between lines for maximum legibility, or for the typographically minded it is set in 13/16 point size of the beautiful Garamond old style typeface.

Part I of the book is *A review of the African Orchids*. An introduction and a recording of the Orchidaceae in Africa is followed by a list of the tribes and subtribes based on Dressler. Chapter one is a wonderful summary of the habits of African orchids, and Chapter two explains the details of roots, stems, and leaves.

Chapter three reaches right into the hearts of hobby growers for it deals extensively with the flowers under such headings as arrangement, colour, fragrance and longevity, size, shape and structure of all parts.

Pollination is one of the most fascinating aspects of orchids and Mrs Stewart shows that she is very knowledgeable on its mysteries. Part I concludes with information on seed and seedlings.

However the text is not exhausted by Part I. Part II comprises the paintings of 50 representative species from all over Africa. Each is on a right hand page and there is a full page of splendidly written data on the left. This commences with a description of the illustrated species in non-technical language. Or rather the few technical terms used are those which would have been acquired by an established hobby grower. A new comer can check them in the book's glossary.

After the description there are wonderful historical details, data on habitat background, and cultural information.

The pictures and cultural data create the feeling that one should dash out and buy some of them. Undoubtedly there will be a trend to grow more of these African orchids.

This "I want" feeling is stimulated by such beauties as *Diaphananthe pellucida*, illustrated on page 103, and the text opposite which quotes Lindley as saying in 1844: "We lament to see how little justice our artists have been able to do to this beautiful plant, whose flowers are as delicate and transparent as if they were flakes of snow fixed by frost in the very act of melting". Mrs Hennessy has captured this feeling.

One is transfixed too by the lovely picture of *Mystacidium capense* with its pendulous racemes of star-like white flowers with long pale yellow-green spurs, creating a bridal veil effect.

Only a few African orchids are commonly grown in Australia. Prominent would be *Angraecum eburneum* and its subspecies *giryamae*. The latter is illustrated on page 97. It grows from the islands of Zanzibar and Pemba to Tanzania and Kenya, mainly near the coast but it has been recorded at 1800 m on Mt Kilimanjiro. The text records that its habitat is warm with ample air movement and a distinct temperature drop at night.

Ansellia africana (page 146) is fairly common in Australian collections. The yellow form is widely distributed throughout Kenya, Nigeria, Natal and Namibia in savanna areas subject to a seasonal dry period. The very dark form is equatorial (Liberia to western Kenya) and is a forest plant preferring shade and humidity.

Other admirable African species grown here include *Stenoglottis fimbriata*, illustrated on page 51, *Cirrhopetalum umbellatum* on page 91, and *Bulbophyllum barbigerum* on page 87.

Genera such as *Aerangis, Disa, Satyrium*, and *Polystachya* are not found in Australia, although the latter is closely related to our *Bromheadia*. *Bulbophyllum* and *Eulophia* do overlap. There are some quite interesting evolutionary patterns indicated by a study of *Orchids of Africa*.

Above all it is a book to be enjoyed, an important aid to species' growers, and eventually it will become an heirloom.

Orchids of Africa by J. Stewart (text) and E. F. Hennessy (art). Published by The MacMillan Press Ltd. Available at leading bookshops. Enquiries to MacMillan Co., of Australia Pty Ltd, 6 George St., Artarmon, NSW 2064. Recommended retail price $55.00. Pages are 34cm x 25cm and most illustrations in natural size.

WATERING ORCHIDS

W. R. "Bill" JOHNSON

Everyone knows, that all plant life requires water for its very existence. What you may or may not be aware of is the functions of water in a plant's system, and how this can be utilised to the plant's best advantage.

The purpose, or theme of this discussion will be the purpose of water, the part it plays in maintaining life of a plant (and of course orchids in particular), and how water can best be applied to gain optimum growth. Note that I specified "OPTIMUM" growth and not "MAXIMUM".

To enable you to understand how important water is to *ALL* living matter, it should be remembered that there is no living cell on earth that can survive without water. Because all animal and plant life is made up of cells neither can maintain "LIFE" without water, although the amount of water required by each living cell might vary considerably. Of course, one should be fully aware of the fact that some plants, and for that matter animals, which can tolerate minute amounts of water might well be unable to exist in conditions which provided too much water. Such is the case with orchids; some require very little water, others a lot. It is essential that we learn which genus requires little water and those genera which require lots.

Knowledge of the water requirements of orchids is obtained in a number of ways:

1. By discussing the subject with others;
2. By reading reference books;
3. From knowledge of the habitat of the genus concerned;
4. From simply being observant.

Of all those four means of gaining knowledge the fourth is the least used, and I am going to suggest to you all that in future you endeavour to continue to observe the growth patterns of all your orchids and from your observations, formulate an opinion as to what they need in the way of water, as well as perhaps other environmental needs. If you can do this, ultimately you will be able to recognise very quickly symptoms of impending disaster and rectify them before it is too late.

What has all that to do with watering orchids? Well, when applying water to a plant you all should be observing the plant at the same time, and if need be, make a decision as to whether you apply water or not, or whether a little or a lot of water should be applied. NEVER apply water without first noting the condition of your orchid, it could be well that a period of drying out is essential.

If we were to remove all the water from living matter it would be found that what would remain is very little of the original matter because more than 90% of the total volume of that matter would have been water and the rest very minute quantities of chemical elements. This serves to illustrate the fact that all matter used to create further living matter is mostly water and that is comprised of 2 parts of Hydrogen and 1 part of Oxygen.

One reason why some plants require more or less water than others is that each has a different water retention rate. That is to say that some plants can control the rate water is lost through respiration, thus preventing the need for taking up more water, e.g. *Cactus*.

To understand the purpose of watering our orchids, some knowledge of the functions of water in a plant's system, and for that matter, before it reaches the internal structure of a plant, must be gained. As a first step I shall deal with the value of water BEFORE it enters the internal structure of a plant.

If I begin at the point where rain is falling in an orchid's natural habitat and follow this through we shall see how the cycle occurs; but firstly let me state now that water is the only vehicle by which nutritution is permitted to enter the plant's system.

If our orchid is an epiphyte and growing on the trunk of a tree, the rain will run down the tree trunk, dissolving as it runs, minute quantities of chemical elements contained in the material over which it runs. This enriched water will then make its way to where the orchid plant's roots are placed — and usually the orchid will allow its roots to grow in the direction of the best supply of water — the roots then act like blotting paper and soak up this enriched water.

Once the orchid's root system has taken up the water which now contains the minute amounts of nutrients the orchid will proceed to process it. Gradually, by chemical reaction, the chemical elements are separated from the water and even the water is split into hydrogen groups and oxygen groups. Just how plants do this is as yet uncertain but plant physiologists are aware that it happens.

The next stage in the progress of what was water is that some water and the other chemicals are transported to the cells of the

orchid. Some water is used to transport the chemicals, and some which has been split up will be used to create the various chemical reactions that create sugars, chlorophyll and other compounds. If we pause here and consider what the purposes of water so far illustrated are, we will note *three functions* of water are evident.

1. Water dissolves other matter and transports it to within the reach of an orchid's roots.
2. Having reached the roots the water, containing nutrient, penetrates the roots and is taken up by the orchid.
3. The plant uses this water to transport the chemical elements it needs for nutrition throughout its system.

Now then, the orchid grower *must*, to make proper use of the water he applies to his orchids, simulate the first of those functions; that is, water is applied containing nutrients to the orchid's roots and in this fashion the orchid is fed *and supplied water* to transport the nutrients into the orchid's system. Of course the orchid grower must provide a total environment to enable his orchids to perform all three of those functions I have outlined. He must provide a compost or growing medium which allows the plant to grow healthy roots so that it might take up the water and nutrients, the orchid must be grown in such a manner that the orchid's roots kept healthy and absorbent, and last but not least, the environmental temperature and humidity should be such that the orchid can grow correctly and therefore make use of the water and nutrient that it has been offered.

It is all very well to know just how the system works in the wilds of Asia or South America but what we have to do is apply the system, *with modifications*, to the total environment *each* of us has created for our orchids, and this factor is where many go wrong.

The area where many problems are introduced is in the mixture, or if you like, compost, in which we grow our orchids. Every grower's mixture is different and therefore *so must be* the treatment given. The compost must allow water to enter, hold it for sufficient time for the roots to absorb enough and then drain away. If too much is applied, and cannot drain away, then this excess water will cause damage to the roots. If the water contains nutrients, (and all water does even if none are added) they will precipitate and be attracted to, or be deposited on, the compost ingredients, and so, *further water* has to be applied to flush that excess of nutrients out of the pot otherwise they will build up and become toxic.

One method of safeguarding your plants from salt build up is use a chelating agent in the nutrient supplied to the plant. One of these is a chelated form of Iron, Hortico make it and market it under the name of Chelated Iron. There are other chelating agents known to exist and apparently one of these is lime.

Chelating agents prevent a nutrient salt from precipitating into the solid state and keeps the nutrient elements in a liquid state allowing them to be taken up by the plant for a longer period, or making it easier for them to be flushed out of the pot.

The message from what I have just discussed is that a further factor exists in our watering practices, WATER FLUSHES EXCESS MATTER FROM THE COMPOST THAT MIGHT BE HARMFUL IF LEFT. Think of it this way, if you have a canary in a cage the bird will scatter the excess food from its food supply over the bottom of the cage and after a while this will foul up the cage and so the cage must be cleaned regularly.

In nature, orchids do not have the problem of being confined to a finite area. An epiphytic orchid does not have its roots in compost, instead their roots are exposed to light, air and water and so no problems can occur; but because we grow our orchids in pots and use some form of vegetable matter in it as a compost, we have to flush out the pots regularly.

The next aspect of water is one which is perhaps not yet fully understood, *but* recent information indicates that the availability of water in the form of humidity in the air is essential for the movement of water through the plant's system. Furthermore, humidity could be essential for plant respiration. If this is so, and the example of our rain forest and the exceptional growth that occurs under rain forest conditions tends to confirm it, then water must be applied in the area surrounding the plant at all times. I am not suggesting that we should spray the plant and its surrounds every day of the year, that would be unnecessary because on cool days the humidity is usually present, but on warm sunny, dry days, and in particular on those very hot, dry days we have in Melbourne, humidity must be present.

If you walk into a glasshouse a humid atmosphere can be sensed, and so can the lack of humidity. This simple observation can be made every time you enter your growing areas and you should learn to check for humidity each time you enter your growing area. If you do, it will become automatic after a while.

One final use for water is that the leaves tend to collect dust particles over a period of time, and so it is a sound idea to mist spray the leaves of your plants at regular intervals to wash off this dust; by doing so, the plant's leaves will receive full light

on them and so be able to photosynthesize.

The method of applying water to your plants is also an important subject. When applying fertiliser, and when giving the pots a heavy watering as one would do in the hotter months, use an attachment to your hose which will deliver a soft pressure of water. I use a DRAMM water breaker fitted to an extension arm for the application of fertiliser and ordinary water. This prevents a strong jet of water being thrust at the plant and removes the chance of damage. Besides, the direction of water can be controlled accurately and should one plant require a small amount of water and the one next to it a lot, then you have more chance of supplying the correct amount of water to each pot using this method.

For misting, and for that matter, applying insecticide sprays, I simply fit a FOGGIT spray nozzle onto the end of an extension arm instead of the DRAMM water breaker and this will spray out a very fine mist and that will raise the humidity level in a glasshouse very quickly.

Those of you who have *small glasshouses* must remember that on very sunny days you must keep up the humidity in your glasshouses, and for heavens sake provide adequate ventilation along with adequate humidity; if your don't, then you will have a giant pressure cooker on you hands and your plants will be cooked very quickly. If you provide continuous humidity in a small area, and leave the door open, your plants should not suffer even on a day when the temperature exceeds 35° C. Dry air kills a plant rapidly but humidity prevents damage. Even if an orchid requires water sparingly, continuous day time humidity will not harm it. Simply withdraw the supply of humidity about an hour or two before the sun is excluded from your glasshouse and that will dry it out sufficiently before night time arrives.

That about covers the subject of watering, with perhaps the matter of water variation between summer and winter untouched. Perhaps I should say that it is a matter for each of you to determine just how much and how often you should apply water in the various seasons, within the environment you have created for your plants. *By environment* I mean the *total environment*, that is the compost, light, temperature and air flow conditions which you supply your plants, *and* the size, type and location of the growing house. The plants you grow are the best indicators of what they require. An orchid will soon show you if too much water is being supplied, the roots will show signs of degeneration, growth will be restricted and possibly the bulbs may show deterioration. On the other hand if growth is rapid, the roots are healthy *and* the bulbs are plump, then you are doing the right thing. Be observant, look at your plants and note what is occurring. While they can't talk to us, orchids can certainly use sign language. It is for you to understand that language.

Well, that covers most of the aspects of water that one should be aware of to grow orchids. Let me then summarise the factors in conclusion:

The purposes and uses of water in orchid growing are:

1. To transport nutrients to within the sphere of the plants roots.
2. To provide a means of nutrients entering a plant's system.
3. To transport the nutrient within a plant's system.
4. To provide a plant with the Hydrogen and Oxygen contained in the water molecule.
5. To permit the plant to excrete waste products by respiration in the form of water through the leaf stomata of the plant.
6. To provide humidity to allow the easy flow of water through the plant's system.
7. To flush out toxic salts from the compost.
8. To keep the nutrient in a dissolved state in the compost so that the plant can take up that nutrient.
9. To clean the foliage of our plants so that optimum photosynthesis can occur.
10. To provide adequate humidity to prevent dehydration during hot, dry spells and to encourage respiration.

Lot 18 Hastings-Dandenong Rd, Cranbourne 3977

Cryptanthemis slateri

The Australian Orchid Foundation is offering $200.00 reward for the re-discovery of this famous underground orchid. See the June 1981 AOR. Publication of details of the original discovery has led to further historical information coming to light. This will be reported in a future issue.

A discovery should be reported immediately by phone to the Sydney Herbarium. Charges may be reversed. The number is (02) 231 8111.

English translation of Schlechter

Final page proofs of this massive work are now being checked by the editor, Mr Don Blaxell. The edition exceeds 1,200 pages and includes Schlechter's maps.

New Guinea orchids are now attracting a great deal of interest and a copy of this work will be essential to an understanding of them. Cost will be approximately $130.00. You may order by sending a substantial deposit to The Australian Orchid Foundation, 107 Roberts St, Victoria, Australia 3040.

"If orchid growing could be reduced to a few simple rules — like dropping in a penny and getting back a flower — then most of the fun and challenge would be gone." *American OS Handbook.*

Day orchid trips around Brisbane

RONALD KERR

Orchid growers visiting Brisbane at any time have a wide choice of trips they can do. All are rich in fascinating scenery and offer the reward of interesting nurseries to visit.

If you have your own car, very good, if not then hire cars are available at reasonable rates. Visitors to the Seventh Australian Orchid Conference can cut costs per head by sharing hire charges.

During the Conference, of course, some tours will be visiting some near city nurseries and beauty spots. For those who wish to go further afield before or after the Conference the following areas are suggested.

Three day trips by car offer so much it's worth doing all three. As an aside, a day trip to the Moreton Bay islands is also a must, but you'll be lucky to see any orchids.

THE NORTHERN TRIP

Northward you can go via the Redcliffe Peninsula, but this could make the day a little too demanding. Redcliffe is better for a trip on its own, and for the nurseries there refer to the March issue of A.O.R.

Travelling the Bruce Highway Nambour is 120km north and headquarters of the Maroochy Shire. On the way you will pass sugar cane fields, paddocks of pineapples, groves of paw-paws, vegetable and flower farms, and maybe occasional trees of the red flowered tea-tree for which Nambour is the aboriginal name.

East and nor'east of the Bruce Highway is the glorious Sunshine Coast and its unspoiled beaches.

Just south of the Big Pineapple, a fantastic tourist complex, is the Maroochydore Road turn-off, and one kilometre along this, on the left, is D. N. & L. Nursery, run by David and Nona Pullin and daughter Lynne Cruise. They have an extensive range in well laid out houses, including hard-cane dendrobiums, ascocendas, vandas, cattleyas, miltonias, oncidiums, and phalaenopsis.

Plants are grown under conditions varying from summer heat to a few frosts in winter.

The nursery is closed Tuesdays, but open 9am to 5pm on other days. The Pullins are knowledgeable and helpful. They may be phoned on (071) 42 1660.

Make the Big Pineapple your next stop. You can't miss it because of the huge fifteen metre high replica of a pineapple visible from the Highway. This attraction is beautifully laid out and it presents the aspects of local primary production in an interesting way.

Continue along the Bruce Highway another 20 kilometres or so through lovely rolling country to Eumundi. Here in Kenilworth Road is Fleetwood Park Nursery, run by Graham and Jean Willersdorf. They have a marvellous array of indoor foliage plants and ferns, plus many interesting hybrid orchids. They also close on Tuesday but will stay open if an appointment is made. The phone number is (071) 47 0121.

The nursery of Graham and Beryl Robertson is on the Blackall Range Road, Nambour, and may be visited either before going north to Eumundi or on the way back. If you have left Brisbane early then the way back can be along a mountain road from Eumundi to Mapleton and then east to Nambour. Or, of course, you can do the reverse going north. The Mapleton diversion is very scenic.

The Robertsons cater mostly for the cut flower trade. They also sell phalaenopsis and dendrobiums and seedlings are available. The nursery is open to Conference visitors on Saturday and Sunday. At other times phone them at (071) 42 1913.

This is quite a large establishment which is bound to interest a visitor, particularly anyone interested in cut flower production. It makes a logical second or third call because the set-up is different to other nurseries.

If time is with you then you may return to Brisbane via Maroochydore and Caloundra. This way you will see some sparkling coastline and pass some wildflower areas.

Numerous route variations are possible in visiting these northern nurseries. The Queensland Tourist Bureau will supply maps and background information. How much living you can cram into the trip will depend on how early you decide to climb out of bed.

SOUTHWARD GAZE

In a day, and ignoring the tourist commercially oriented Gold Coast, you can visit some of the most majestic mountain country in Australia. Interspread with some gem orchid nurseries.

At one time the whole of the McPherson Ranges was a most noble rainforest. Now only vestiges remain, but these are glorious and should not be missed. In the Lamington National Park you will see centuries old antarctic beeches, age old cycads, enormous ferns, unique wildflowers, and wonderful birds and animals. Breathtaking valleys and gorges enclose crystal streams and foamy waterfalls.

It is important to discuss a projected trip to this area with the Queensland Tourist Bureau in order to get the most into the available time.

First call on the Lamington should be to the *Orchids of Green Mountain* on the famous O'Reilly family property. The O'Reilly guest house is on the only private land in the Lamington National Park. Fifteen years ago Mr C. W. Harman suggested to the late Bernard O'Reilly that an area be set aside to preserve the many orchids from areas where logging was destroying their habitat.

Access to O'Reillys is quickest by taking the Pacific Highway to Nerang then branching west to Canungra. An alternative is to branch off at Beenleigh but it would be best to leave this route until the return journey to Brisbane and include Mt. Tamborine in the itinerary.

Mr Harman and volunteers from the Queensland Orchid Society and affiliated societies spent years developing a site only a few minutes walk from the O'Reilly homestead . . . Every orchid species that grows wild in the McPherson Ranges is represented there. You could pass the day pleasantly at O'Reillys, but if you must squeeze in Mt. Tamborine in this one day then tear yourself away.

The way to and from Mt. Tamborine is very picturesque and unless your aesthetic senses are paralysed you will need to stop at places en route to admire the views, see the waterfalls and rain forest picnic spots.

You will need to take the road that goes up the western side of Mt. Tamborine. This was very rough when I used it years ago but I understand it is now satisfactory. Return should be down the eastern road to Beenleigh.

Should you have been lucky enough to have met Bill and Jean Cannons and been invited to drop in, you will be thrilled by their orchid acre and excited by their continued work in hybridising.

Australia'a top softcane dendrobium grower, Mr Harry Spence, lives in Lahey's Road. Harry is always ready to pass on his wide knowledge of these orchids but always phone for an appointment. His number is (075) 45 1556.

In Long Road, right opposite the Radio Telephone Tower, is the nursery of Mount Tamborine Orchids. Roy and Audrey O'Hara have much to show you.

The O'Haras started out in 1956 to grow carnations and gladioli for cut flowers but soon succumbed to the spell of orchids. Their policy has been, and is, to continually upgrade the quality of their stock. Now, as sole Queensland agents for McBean's Australia and Yamamoto, plus a huge range of top quality cattleyas, they have a very fine nursery. They open 9am to 4.30pm but are closed on Sundays. Phone number is (075) 45 1303.

At 124 Oxenford Road, Mount Tamborine, is Merrellan Orchids, the nursery of Ted and Barbara Gregory. Both are well known for their work with native orchids at Taree, N.S.W., over many years. Ted would have to be the best and most knowledgeable native orchid grower in Australia. He and Barbara grow other genera equally well.

Ted boasts a lifetime involvement with natives and half a lifetime with other orchids. Half the nursery is devoted to native species and hybrids. The other half is made up of cymbidiums, cattleyas, paphiopedilums, and exotic species. You can find some unusuals here.

Merrellan Nursery is open seven days a week, but Ted and Barbara don't want to miss the Seventh Conference lectures and Brisbane orchid shows so about this time be sure to phone first on (075) 45 1526.

You can catch up on a meal at the Mt Tamborine pub, and arrive back very late in Brisbane.

That would be a very full day and you might not see or do all you set out to do. Maybe it would be easier on the blood pressure to do the Lamington and Tamborine plateaus on separate days.

WESTWARD HO

No Brisbane holiday is complete without a day's dash to the Darling Downs town of Toowoomba. It is an attractive garden conscious city which supports three orchid societies, one of them devoted to native orchids.

The Toowoomba Orchid Society Spring Show is held on the roof car park of Myers, commencing this year on Saturday 18th September and finishing Saturday 25th. It is open in shopping hours, also 9am to 5pm on Sunday 26th. This is the Carnival of Flowers Week in Toowoomba and it overlaps with the Seventh Australian Orchid Conference.

Toowoomba sits high on the edge of the Great Dividing Range, and a visit to Picnic Point is a must. Here the range drops dramatically and a magnificent panorama stretches past Tabletop and Sugarloaf Mountains to Mount Warning over the N.S.W. border.

There are other fine vantage points around this scenic city.

Toowoomba has at least one orchid nursery. This is Simpson's Orchids, run by Mrs Bev Simpson of 48 Wentworth St. Phone (076) 35 1943.

Mrs Simpson is Queensland agent for Featherhill Orchids and has a good stock of standard and miniature cymbidiums, also native hybrids. She also carries mini flasks.

AND SO TO BED

Any of these trips is certain to cure even the most perverse cases of insomnia. You'll arrive back at your digs in Brisbane late and very tired — but isn't it worth it!

"My own view on orchids is that the passion to possess and grow species is not so much the visual pleasure of the wide range of weird flowers, but the pleasure in the achievement of making it flower in a synthetic environment." Statement in the *Mornington Peninsula O.S. Orchid News.*

Macama Orchids
169 Pennant Hills Road, Carlingford, NSW
Australia 2118
A. F. W. and D. M. Alcorn
(02) 630 1904

Macama 'Jocelyn' AM, NSW/AOS



Mericlones of Macama 'Jocelyn', AM available about November.

At the 10th World Orchid Conference our Lycastes won Two Silver and Two Bronze Medals.

Koolena 'Sunset' won Best Lycaste or Angulocaste of Show.

SEEDLINGS $6.00 EACH. MACAMA CROSS $7.50
ADVANCED SEEDLINGS $10.00 TO $11.50 EACH.

Divisions of some clones available — prices on application.

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Australia's Leading Orchid Hybridist



To give you an understanding of the number of seedlings we have to choose, and of course the chance to produce another ***Terama 'Cardinal'****, and the brilliant new* ***Wallamurra 'Jupiter'*** *which will be ready for release approx. 1984. These seedlings represent many years of hard work, to cull and select plants for the future and we hope to produce many more Terama's, Culpaulin's, Wallara's and now Wallamurra's forever looking for that final pinnacle of perfection!*

Our season has opened with a multitude of crosses in all genera of orchids. Obviously the earlier the better for orders for best selection of size. All seedlings have exceeded our hopes for size and vigour of growth, and we are hoping for many new champions to come from our seedling beds as shown above. Oncidiums are outstanding this year (flowering as in May 1982), and Cattleyas, Sophronitis, also Mini Cymbidiums just starting to flower standard from beginning of June including Wallamurra 'Jupiter', AM/OSNSW, AM/AOC. The award from the AOC has just come through and we know Wallamurra 'Jupiter' will gain many more awards overseas, and win many championships here, as it is really an exceptional orchid. Available approximately from 1985 for sale. All needs for the orchid grower are in stock, and our staff is only too happy to help with any queries. This is the time to visit Wondabah and view our magnificent show of flowering orchids through to October.

NURSERY OPEN:

MAY ONLY	*JUNE TILL OCTOBER 31*	*NOVEMBER TO APRIL*
6 DAYS A WEEK	*7 DAYS A WEEK*	*5 DAYS A WEEK*
MONDAY TO SATURDAY 9 TILL 5	*9 TILL 5*	*9 TILL 5*

NEW AUTUMN/WINTER CATALOGUE AVAILABLE ON REQUEST.

For our Gosford Enthusiasts our New Agent is:

WYONG ORCHID NURSERIES, BASFORD ROAD, LAKE MUNMORAH

A CHEAP AND EFFECTIVE GLASSHOUSE

S. BATCHELOR

A.O.R. thanks Cumberland O.S. for permission to print this article.

Most orchid growers begin their addiction with a few plants either under a tree or in a small shade house in the back yard. The time arrives however, when every grower begins to think how nice it would be to own a glasshouse. The inevitable questions arise — how much to build? — how much to operate?

The cost of both building and operating will depend entirely on the size of the glasshouse chosen, and its aspect. I feel that a good size to start with is 10' x 8' (3.05m x 2.44m) and in the style of building I will endeavour to describe it will be easy to add to at a future date.

The description which follows is essentially of the glasshouse which I built fifteen years ago and which I am satisfied is as economical and effective as any glasshouse obtainable and much cheaper both to build and to operate than any of the others — there is also the satisfaction of having done the work — all the work yourself. Although of timber construction it is still as sound as the day it was built, this is due to the manner of construction which isolates all timber components from the weather and also from the humid inside atmosphere of the glasshouse.

Having established the position and size of your glasshouse, mark out on the ground the positions of your four corner posts, which are of 3" x 2" (75mm x 50mm) hardwood, making sure the positions form exact right angles to each other. If the base of the glasshouse area is level, the length of the posts for your rear or southern wall will be 11' (3.35m) long and those on the front or northern side 10' (3.05m). These will be set into the ground for 2.6" (760mm) and filled around with concrete.

Before erecting the posts the part to be fixed in the concrete should be well charred with a gas torch, blow lamp, or similar heating appliance and painted whilst still fairly warm with wood preserving oil (the oil is inflammable so don't allow it to come into contact with the flame) — a second coat of oil before the posts are erected is good insurance against rot.

After the corner posts are erected follow with three intermediate posts at equal distances to complete the two long walls. The two short walls are completed by installing two intermediate posts far enough apart to fit a door in the centre, of whatever width you desire. When you have decided which end you will have your door, you will need to fit adjustable louvres into the corresponding position in the opposite wall about two/thirds of the door area is a suitable area for the louvres. I prefer to have the door in the western end, so that during blustery westerly weather the door can be closed and the louvres opened to create comfortable conditions inside.

The posts in the rear or southerly wall can then be cut off squarely at a height of 7'10" (2.38m) and those on the opposite long wall at a height of 7'1" (2.16m) (after the concrete is well dried that is) and a 3" x 2" (75mm x 50mm) plate affixed to the top of each long wall. You will then be ready to fix your rafters, again of 3" x 2" (75mm x 50mm) hardwood.

Place the ends of a rafter at the ends of each long wall, mark and cut your intermediate posts at the angle indicated by the rafter and fix securely. Then fix the other rafters over each of the posts in the long walls, and cut off flush with the outside of the rear wall, a small overhang is allowed past the front wall, say about 6" (150mm) just for appearance sake . . . 3" x 1" (75mm x 25mm) battens are then fixed to the rafters, about 2'6" (760mm) apart, this supports the fibreglass or alysinite roof sheeting (not coloured — opaque, almost clear only) . . . A 3" x 2" (75mm x 50mm) rail is then fitted about 18" (460mm) to 2' (610mm) from ground level around the front and end walls (except for the door way) and fibrous cement sheet attached to inside and out creating a 3" (75mm) space of still air, which is one of the best means of insulation available.

Horizontal glazing bars are fitted to the front and end walls (distance apart to suit the size of your glass), again remembering your door and louvre space.

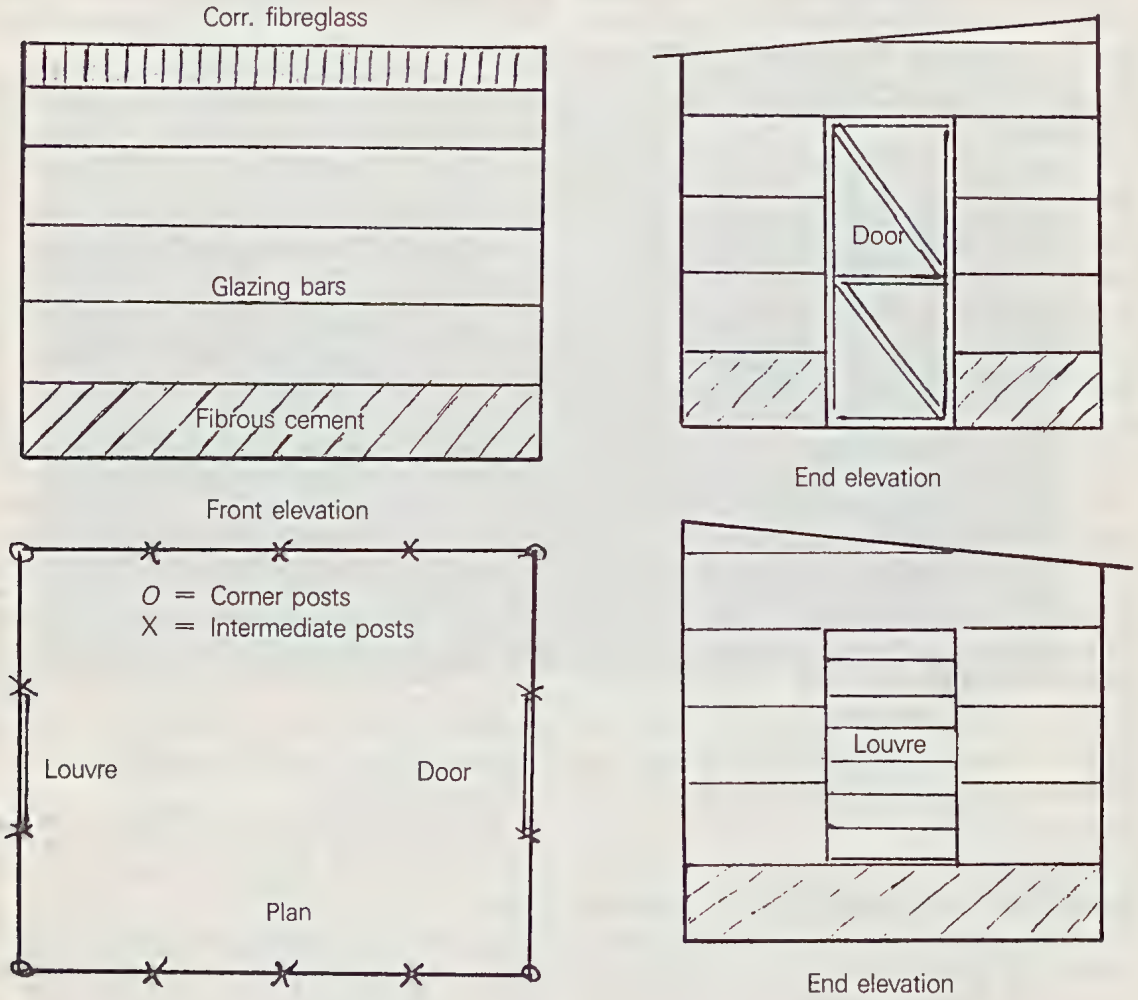
The bottom of the louvre frame sits on the 3" x 2" (75mm x 50mm) rail that holds the fibro around the bottom of the house. The rear wall is covered on both sides with fibrous cement again creating 3" (75mm) of still air for insulation.

After glazing outside, attaching your fibreglass roof and rear wall fibrous cement, spend some time filling in all the little gaps and spaces where a draft could enter. On the corners where the glazing bars meet at right angles I have found that a length of 26 gauge galvanised iron about 8" (200mm) wide and bent at right angles and fitted from the bottom to the top effectively excludes drafts from this area and also makes an eye pleasing finish to the corners.

When all this has been done it is time to move inside. *Before you build your benches,* the underside of the rafters, front and both end walls should

Diagrammatic plan for a cheap and effective glasshouse

The plan below is drawn to approximate scale only – the recommended sizes are more fully set out in the attached article.



be lined with a good quality ultra-violet resistant *agricultural* plastic. The best has a yellow colour whilst still in the roll, but is clear when unrolled. It can usually be obtained as off-cuts from the builders of the new agricultural plastic tunnel houses, otherwise from I.C.I. Plastics.

To line a glasshouse with plastic sheet requires the assistance of at least two good friends – no one person contains sufficient ill-temper and bad language to carry out this job on his own – it brings out the worst in everyone attempting it, but, it is the key to the economic running of your glasshouse – apart from the louvre and door area the lining of the house should be virtually air-tight. Remember also that the plastic shrinks considerably in cold weather, so allowances must be made for this.

The door of the house is constructed of soft wood 2" (50mm) x 1¼" (30mm) framework and covered with the plastic sheet on both sides.

When closed up in winter time my house is virtually air-tight. I have been told many times that you cannot grow plants in a sealed house, however, no one has told my plants yet, so they continue to grow quite happily without ventilation, relying only on the fairly brisk air movement provided by a 10" (25mm) fan, which is essential to growing in these conditions. During warm weather both door and

louvres are left open, but the fan is never turned off.

The house will only need an ordinary household fan heater for heating in winter time, preferably connected through a thermostat which can be set at your preferred temperature, which can be as low as 12 deg. c. to grow quite a wide variety of orchids which are otherwise cold sensitive.

The above description is of an efficient basic glasshouse, you may incorporate variations in the building to suit your conditions. Shading is something you must work out depending on the conditions on your particular site.

Other refinements, such as evaporative cooling and humidifying can come later if and when you decide you want them.

Sid Batchelor, 2 Woodland St, Baulkham Hills 2153

GERALD McCRAITH HONOURED AS PATRON

At its meeting on Monday 8th March Mr Gerald McCraith was installed as the Maribyrnong Orchid Society's Patron. To be awarded such distinction the Society's constitution provides that "such a person . . . shall have rendered meritorious contributions towards the aims of a Society and have achieved distinction in orchid culture." All will agree that Mr Gerald McCraith meets these criteria.

Maribyrnong OS is to hold its Spring Show on the 18th and 19th September next. Schedules may be obtained from the honorary secretary, Mrs L. F. Scott, 7 Rainbird Court, Keilor Downs, 3038.

7th AUSTRALIAN ORCHID CONFERENCE SHOW

Greek Community Centre
Edmonstone Street, South Brisbane
Setting up Thursday, September 23

Open 24th to Wednesday, 29 September

One of the
World's Great Orchid Shows.

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Exhibits from every State.

DON'T MISS IT!

MEETING CHANGE IN NOR'WEST TASMANIA

The Orchid Society of North Western Tasmania now meets on the second Monday of each month. Where Monday is a holiday the meeting will be on the second Tuesday. Venue is the same, namely Hellyer College, Mooreville Road, Burnie.

A combined show with the Burnie Lapidary Club is being arranged. Devonport Orchid Society members were guests at the May meeting. Intending members should contact the secretary, Mrs M. Nutting, phone 31 5849.

Ceratobes Orchids



New Guinea ceratobiums.
Some species,
mainly N.G. anletopes
and their hybrids.
Seedling to flowering size.

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Ph: (079) 42 1546

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WAUCHOPE STADIUM
Cameron Street

Nice socialising and entertaining speakers. Don't miss top photographer Lex Barton on rare and unusual terrestrials. Alan Garrett and Bruce Johnson will lead a unique forum on cymbidiums.

Registration fee $25.00 — Dinner $8.50
Accommodation deposit $20.00

Please register by 30th June. (Above prices are cheaper than previously announced).
Caravan bookings available.

Secretary: Harry Klose, PO Box 193, Wauchope 2446. Phone (065) 85 1710.

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TH Australian Orchid Conference and Show
28th Aug — 4th Sept, 1983

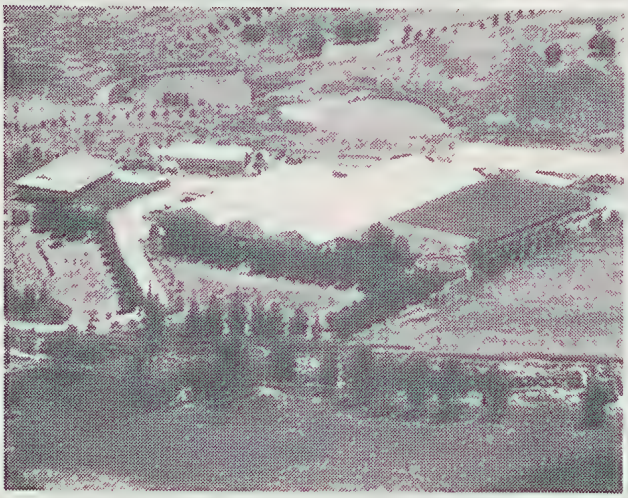
For further information and tentative bookings, please write . . .

Conference Secretary, 8th Australian Orchid Conference
PO Box 129, Townsville, N Qld 4810

Registration forms will be available at the 7th Australian Orchid Conference . . . Brisbane, September, 1982.

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South Australia's Leading Professional Orchid Growers



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We have moved all retail sales to our larger nursery at Murphy Road, Houghton SA 5131 to celebrate the opening of our new retail showroom the following Cymbidium mericlones are offered at 33⅓% off retail prices.

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SENSATION 'IMPERIAL' HCC – AWARDED RED
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VIA REAL 'GAIL' A.M. – SHOWBENCH WHITE
SYLVIA MILLER "PEACHY KEEN' – SM/CSA – YELLOW – ORANGE NOVELTY
IVY FONG 'SULTAN' HCC – AWARDED MAROON NOVELTY
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SPECIAL RELEASE OF PHALAENOPSIS SEEDLINGS

Approx. leaf length 9-12cm. Price $5.00 each.

PH1. (WILLIAM SHAFFER x CHARLES SHAFFER) x HERMOSA 'HIGHBURY' HCC *Expect top showbench and award whites.*

PH2. (INCA GOLD x BARBARA MOLER) x LIPPEROSE x CONTESSE) *Expect Novelties and unusual yellows to Mauve.*

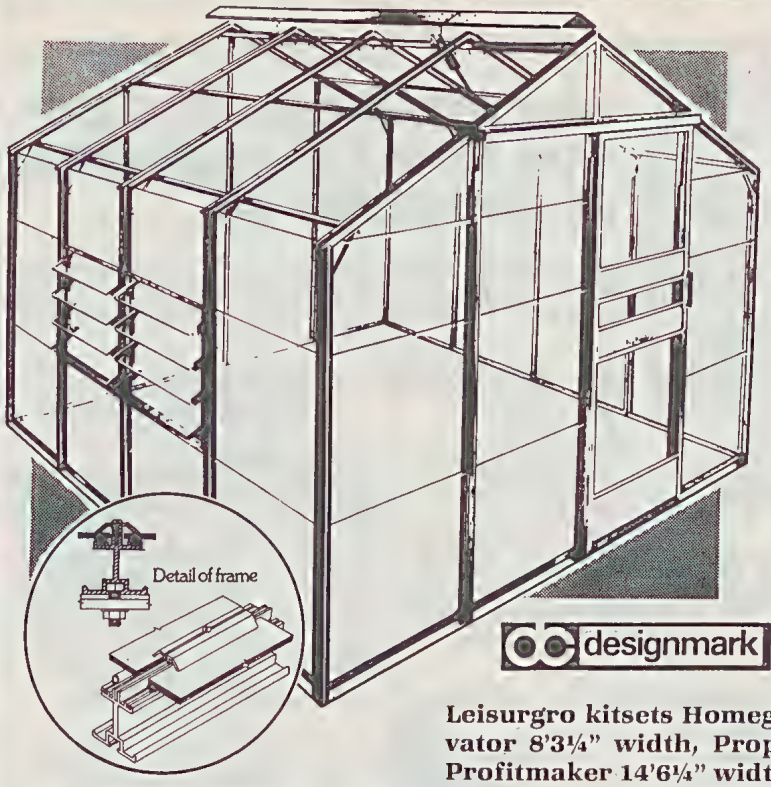
PH3. MALIBU GIRL x HERMOSA 'HIGHBURY' HCC *Expect pinks and whites some veining.*

PH4. (CARNIVAL x LEILEHUA) x HERMOSA 'HIGHBURY' HCC *Expect large pinks and whites some veining.*

NOTE — Cash with Order. Please state method of transport preferred.

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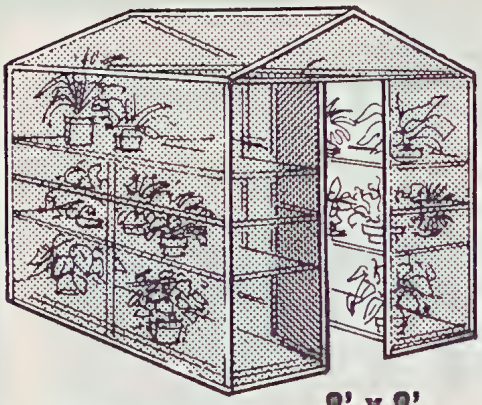
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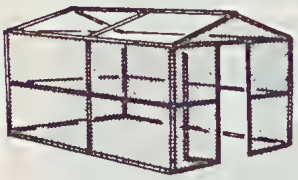


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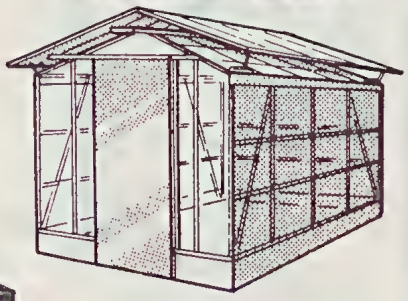
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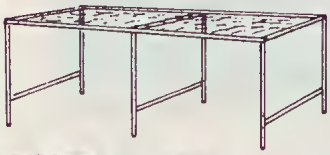
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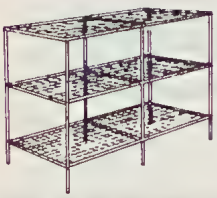


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ORDER ONE OF THESE SHADEHOUSES — IT WILL PAY FOR ITSELF IN NO TIME!

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Standard Shelf Widths: 12", 21", 32". Lengths: 47", 72", 94" and multiples thereof. Double width shelving can also be supplied. Triple layer bench. Width 31", height 6", 30" & 54", lengths 47", 72", 94". Multi layer benches also available.

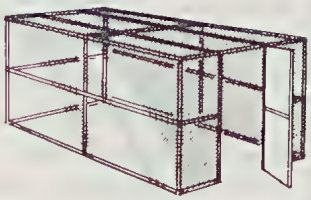
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Species society for Sydney

A strong steering committee is laying the groundwork for formation of a Sydney Orchid Species Society.

It is expected that meetings will be at a venue in the Parramatta area. The initial meeting and the regular meeting time have yet to be determined.

Interested folk should contact one of the steering committee members mentioned here. Suggestions to aid this project will be welcome.

Those to contact are Messrs G. Banks, phone 639 4815; L.V.A. Mountford, 639 4145, and K. Blackburn, (045) 73 2317.

The species grower has more problems than one whose collection is mostly hybrids. A wide species collection involves plants from a diverse range of climates and therefore the grower must know the specific requirements for each one.

Further, he must learn to adapt one or two growing houses to achieve a range of microclimates. He must be aware that his success in maintaining rare species is essential to conservation.

It is true that a good species grower is the salt of the orchid growing fraternity.

It will be an honour to be a Foundation Member of this new society to be devoted to the special needs and problems of the species grower. Phone one of the committee today.

This will be the third species society for Australia. Where will the fourth be: Melbourne or Adelaide?

Bankstown's Mini Workshop

On Saturday, 20th March, 1982 Bankstown Orchid Society held a Mini Orchid Workshop, designed to help the up and coming Orchid growers, as well as the ones of long standing. Eight well known lecturers, such as, Ray Dean, John Bisset, Bert Cardwell, George Colthup, Bert Schwartz, Gordon Hansen, Athol Bell and Bankstown's own John Mata and Ken Organ, presented papers on new methods of orchid growing with up to date types of media and fertilisers.

The Chairman, President Tom Cooper, called on Mr Wal Upton, President of the Orchid Society of NSW, to officially open the Workshop and welcome the local growers and visitors from as far as Canberra, who showed their enthusiasm for growing orchids with their presence.

Everyone commented on the number of lecturers made available and the high standard of their notes.

At the conclusion of the Day, Mr Cooper called upon Mr Wal Upton to officially close the Workshop.

In doing so, Mr Upton congratulated Bankstown Orchid Society for presenting an Orchid Workshop that although advertised as a Mini Workshop turned out to be a major event, he also congratulated the ladies of the Committee for doing a great job of the catering, with ample food and refreshments, and making the whole thing look as easy as a Sunday picnic.

Mr Upton also thanked Mr Bill Smoothey, who acted as the official photographer for the day, and was seen running everywhere and shooting anything that moved.

IN THE MAIL

MISTAKEN IDENTITY?

Dear Sir,

In the December, 1981, issue of *The Australian Orchid Review* photographs of AOC Award flowers were published. This letter is in reference to AOC Award No. 323 — *Laeliocattleya* Bullion 'Dundas', which gained an HCC from both OSNSW and the AOC. An analysis of the flower indicates fairly plainly that it is a brassolaeliocattleya and although it is now too late to do anything about this, another flower has been wrongly identified and internationally labelled in my opinion. *Laeliocattleya* Bullion was raised or named by Miss Abbott, of California, in 1959. The grex contained six infusions of *Cattleya dowiana*, four of *C. labiata*, two of *C. trianae*, and one each of *Cattleya gaskelliana*, *C. warscewiczii*, *C. mendelii*, *C. lueddemanniana* and *C. bowringiana*, and one of *Laelia purpurata*. Nowhere in its pedigree does *Cattleya* Edithiae appear, yet it is almost certainly a descendant of that hybrid. Where has this clone of *Laeliocattleya* Bullion been hiding since it was raised and named? Perhaps something of its history should be given to clear up this point. It is not unusual for delayed recognition to be given in the way of an award because *Laeliocattleya* Fedora, a 1931 raising, gained this distinction for me in the late 1960 period. It is also not unusual for orchids of all genera to be wrongly identified and the Sanders List is full of instances. Some are recognisably wrong, as I consider this clone to be, but it is always difficult to argue with a piece of celluloid or plastic and it does not excuse me wrongly naming *Laeliocattleya* Bullion in another place.

— *J. N. Rentoul*, Somers, Victoria.

VICTORIAN A.N.O.S. HONOURS MEMBERS

This group is very strong in numbers and members are very devoted to our Australian native orchids. Last October their Spring show was really packed with people for the two long days it was open. Two members who have helped it grow were recently honoured with life membership. They are Jack Vaughan and Gerald McCraith. A well deserved recognition for meritorious service to the club and the whole community of growers.

"Unless the flowers of orchids were by some means rendered attractive, they would be cursed with perpetual sterility." Darwin.

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The following flasks are available in 5's and 10's only and will be ready August/September, 1982.

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Arcadian Sunrise 'Golden Fleece' — A vibrant yellow.
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Jean Slattery 'Cecil Park' — unquestionably an orchid of the future.
Pappa Sam 'Penshurst' — one of the world's most beautiful September flowers.
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Levis Duke 'Bella Vista' — flowers in late September, top showbench and cut flower.

FLASK OF 5's — $16.50 EACH (5-7 PLANTS)

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No. 8	MALONES AM-AJOS x 692, FLORAFEST. Expect some brilliant dark reds. 692 var. Florafest is a plant which carries flowers of a very deep red.
No. 128	703 'PRECOCIOUS x MALONES 'FANTASY'. Expect mauve to purple shades of award shape.
No. 108	803 'PRINCESS' x 903 'DIANA' Whites of clear sparkling colour with gold lips should predominate.
No. 48	693 'BICOLOUR' x 693 'DISTINCTION' We expect two tonings in pink to eventuate.
No. 122	875 'MOYNA' x GOLDEN CRESCENT No. 1 Expect some fine yellows to emerge from this cross.
No. 94	902 'GREEN LIP' x GOLDEN CRESCENT No. 1. Expect some very interesting novelties.
No. 13	803 'WHITE ANGEL' x YUKIDARUMU 'THE QUEEN' This cross was made with the anticipation of miniature plants with glistening white flowers with a contrasting purple lip.

Flask of 5's (5-7) $8.50, 10's (10-15) $12.50, 25's (25 plus) $22.50.
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Lc. ADOLPH HECKER 'MISTY' HCC/OS, NSW/AOC. — If you are looking for a fine cluster, this is your chance to own one of the best. This beautiful Cluster Cattleya is capable of carrying large heads of medium size colourful blooms.

2½" Pots — $15.00 each.



Blc. WAIKIKI GOLD 'LEA' HCC/AOS, CR/HOS. — Another, which is a fine yellow concolour, its picture speaks for itself.

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POT. GORDON SIU 'RED RADIANCE' AM/AOS. — A plum Red Cattleya which is so different, a vigorous grower and a bargain at this low price.

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over a hot cup of coffee,
which is on tap for the duration
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B1. **Lc. SCARLET IMP 'AMY' AD/AOC/QOS x C. DAEDALUS.**
Vigorous growing clusters of good shape — Sunset to Mauves.

B2. **L PURPURATA WERKHAUSERI Var. OCULATA x YAIGWAVONG.**
First parent is white with 2 blue eyes on labellum and up to 10 blooms on the spray. Second Parent is an award quality white.

B3. **(C. HARRISONIANA x C. LODDIGESII) x Lc. ANA MARIA DUVEEN.**
Colour range similar to Lc. Betty Lane. Medium size blooms.

B4. **Blc. RANGER SIX x SYLVIA FRY (HAMEYS).**
Large exhibition Lavenders from this cross.

B5 **(Blc. NACOUCHE MARGARET x DINSMORE 'PERFECTION') x BLC MARION WELCH.**
Another very good exhibition Lavender.

5½" POTS — $6.00 EACH OR ALL FIVE FOR $25.00.
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Ionopsis paniculatus, Cattleya dowiana aurea, Cattleya elongata, Laelia flava, Laelia endsfeldzii, Dend. atroviolaceum, Dend. gouldii, Oncidium henekenii, Oncid. pulchellum, Trichoglottis philippinensis.

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2 inch pot seedlings from $2.50,
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Dendrobium veratrifolium, Dendrobium chameleon. Renanthera monochica, Jumellea major, Dend. canaliculatum x Dend. capra, plus more odd and unusual orchids.

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Lc. Leafwood Lane. 'Vi'	2" pot size	$5.00
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O. Good Show x O. Rainbow	2" pot size	$2.50
C. Interglossa x Bro. Sanguinea	2" pot size	$3.00
C. Chocolate Drop x Slc. Psyche	2" pot size	$3.00
Blc. Waikiki Gold 'Lea' x Bro. Sanguinea 'Aurea'	2" pot size	$3.00
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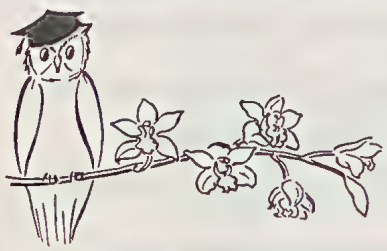
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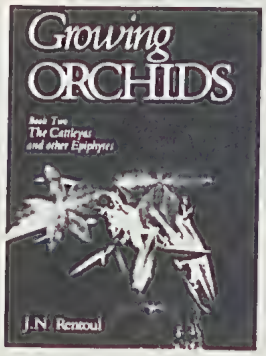
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SHOW DATES, MEETING NIGHTS AND ADDRESSES

ABBREVIATIONS

To save space details have been shortened in places where no ambiguity is likely.

DATA

This listing includes all available data at time of going to press. In some cases only the secretary's name is given. Enquirers should contact the secretary for data relating to show dates or meeting night.

QUEENSLAND
BRISBANE AND VICINITY

Queensland OS. Meets 2nd Mon Metropolitan Senior Citizens' Centre, McLachlan St, Valley. Host society for Seventh Australian Orchid Conference. Sec: W. Murphy, GPO Box 2002, Brisbane 4001. 378 7649.

Aspley Orchid Society. Meets 1st Fri at Kedron High School, Park Road, Wooloowin. Sec: R. Sommerville, PO Box 67, Aspley 4034.

Brisbane OS. Sec: I. H. McCallum, PO Box 94, Stones Corner 4120.

Caboolture OS. Sec: Mrs V. Rapkins, PO Box 549, Caboolture 4510.

Craigslea OS. Sec: M. Graimes, C/-33 Ferricks St, Stafford 4053.

Darling Downs O. Ass. SPRING: Eager's Showroom, Toowoomba, Sat 18/9 to 25/9 in Carnival of Flowers week. Sec: Mrs S. Stone, PO Box 3216, Toowoomba 4350. Meets 3rd Thurs, Scout Hall, Ruthven St.

Eastern Districts OS. SPRING: Guardian Angels Hall, Bay Tce, Wynnum. Sat, Sun, 11/9, 12/9. Mrs S. Crosby, PO Box 60, Wynnum Central 4178. Meets 4th Thurs, Guardians Hall.

Glasshouse Country OS. Sec: Mrs N. Frizzo, PO Box 21, Beerwah 4519. Phone 94 1141. Meets 2nd Thurs, CWA Rooms, Beerwah.

Gold Coast OS. SPRING: Aug 27, 28 and 29 in Owen Park Showground as part of Gold Coast Show. Always a nice display. Sec: Mr W. Murphy, PO Box 323, Burleigh Heads, Qld 4220. Meets SCWD Hall, Burleigh Heads on 2nd Sun in month at 1.30 pm.

Gympie & Dis OS. Sec: Mrs A. Maher, PO Box, Gympie 4570.

Ipswich OS. For data on Spring contact K. Imhoff, PO Box 272, Ipswich 4305. Phone 282 3860. Meets 1st Wed, Humanities Building, Ipswich 4305.

John Oxley OS. For show details and confirm meetings contact Mr H. Faber, 47 Premier St, Oxley 4075. Meets 2nd Wed, Uniting Church Hall, above.

Maroochydore OS. Sec: Mrs Z. Rogers, PO Box 382, Maroochydore 4558.

Maryborough OS. SPRING: Memorial Hall, Adelaide St. No details. A big society and a big show. Meets 2nd Tues, TAFE College, Kent St. Sec: Mrs J. Skyring, PO Box 389, Maryborough 4650. (071) 21 6217.

Mt Coot-tha Day Os. Sec: Mrs T. Tinney, PO Box 32, Paddington 4064.

Native OS of Queensland. Sec: Mrs J. Crane, PO Box 159, Broadway 4000. Meets 1st Mon, Bread House, 49 Gregory Tce, Brisbane, 8 pm.

North Albert OS. SPRING: Orchid Spectacular, Oldmac Toyota Showroom, 3376 Pacific Highway, Springwood. Open show, competitors from all societies welcome. Sec: Mrs Val Heyden, phone (07) 349 9610. Meets 3rd Tues at Woodridge State High School, Wembley Rd, Woodridge.

North Brisbane OS. SPRING: Toombul Shopping Town, 2, 3, 4/9. Meets St Peters C of E Hall, Toombul Rd, Northgate, 4th Thurs, except April and Sept 3 Thurs. For confirmation of meetings contact Sec Mrs V. Scales, 14 Rawson St, Woolowin 4030. Also meets 2nd Tues, 9.30 am for shift workers.

North Coast OS, Nambour. SPRING: Civic Hall, Nambour, Thurs 2, 3 and Sat, Sept 4. Meetings 4th Mon, Band Hall, Daniel St, Nambour at 7.45 pm. Sec: Mrs L. Paroz, PO Box 140, Nambour 4560. (071) 45 9348.

Orchid Species Society. For show details and confirm meetings contact Mrs P. Campbell, PO Box 485, Toowong 4066. Meets 3rd Mon, Mt Coot-tha Botanic Gardens Auditorium.

Pine River OS. SPRING: Kensington Village Shopping Centre, Strathpine, Thurs 26/8 to Sat 28. Society and commercial displays plus sales stall. Sec: M/s D. Marques, PO Box 229, Strathpine 4500.

Redcliffe OS. SPRING: RSL Hall, Redcliffe Pde, 11-12/9. Mrs N. Feakins, PO Box 51, Margate Beach 4019. Meets 2nd Wed, CWA Hall, Woody Point.

Redlands OS. Sec: R. E. Wilson, PO Box 116, Cleveland 4163.

Sunshine Coast OS. SPRING: Caloundra. Sat and Sun, 2 and 3/10. For details contact Miss A. Hall, PO Box 279, Caloundra 4551.

Toowoomba OS. SRING: Myer Roof Top during Carnival of Flowers, Sat 18 to Sat, Sept 25. Shop hours except Sun 9 am - 5 pm. A wonderful week to visit. Dr N. Grundon, phone 35 2570, PO Box 885, Toowoomba, Qld 4350. Meets 4th Fri except Sept and Dec, St James Hall, Russell St.

Warwick OS. Sec: N. D. Cook, 39 Myall Ave, Warwick 4370.

West Brisbane OS. Sec: Mrs M. Keogh, 56 Bellata St, The Gap 4061.

West Moreton Orchid Group. Sec: R. Greinke, PO Box 101, Ipswich 4305.

Wynnum Manly Dis OS. RSL Hall, Manly, Sat 9/10 and Sun 10/10. Set up by 8 pm on 8/10. This society's first-ever show. Sec: J. Turpin, PO Box 91, Manly 4179. Meets 3rd Wed, Bayside Education Centre, Whites Rd, Manly.

NORTH QUEENSLAND

Atherton Tableton Tableland OS. Sec: Mrs Ivy Armour, PO Box 427, Atherton 4883. Meets 1st Thurs except Jan, CWA Hall, Jock St, Atherton.

Ayr & Dis OS. Sec: Mrs E. J. Dwyer, PO Box 412, Ayr 4807.

Blackwater & Dis OS. Sec: Mrs L. Weaver, 11 Bottletree St, Blackwater 4728.

Bowen OS. Sec: Mrs P. Tracy, PO Box 726, Bowen 4805.

Bundaberg OS. Sec: Mr A. Bennett, PO Box 1173, Bundaberg 4670.

Capricorn OS. Sec: P. Berrill, PO Box 697, Rockhampton 4700. Meets 2nd Fri except Jan, Bolsover Chambers, Bolsover St, Rockhampton, 7.30.

Clermont O & G S. PO Box, Clermont 4721.

Emerald OS. Sec: Mrs G. Coombs, 32 Esmond St, Emerald 4720.

Gladstone OS. Sec: Mrs N. Merritt, PO Box 867, Gladstone 4680. Meets 1st Wed 7.30 pm, Gladstone Bowls Club Hall, Ferris St.

Innisfail OS. Sec: A. Matthews, PO Box 475, Innisfail 4860.

Mackay OS. SPRING SILVER JUBILEE. Centrepoint, Mackay. Thurs 2/9, 3/9, 8 am - 10 pm, Sat 4/9, 8 am - 2 pm. Wide range of genera. Sec: Mrs Y. Matthews, PO Box 776, Mackay 4740. Phone 59 8384. Pres Mrs M. Purnell, phone 42 1546. Meets 3rd Tues at Christian Bros College Rec Hall.

North Queensland OS. Sec: A. S. Smith, PO Box 1024, Cairns 4870. Phone 55 1246. Meets 2nd Mon, Education Centre, Morehead St, Bungalow. No later details advised.

Mt Isa O & F S. Sec: Mrs M. E. Lett, PO Box 702, Mt Isa 4825.

Proserpine OS. Show details from Mrs D. Lucas, PO Box 55, Proserpine 4800.

Rockhampton OS. SPRING: St Paul's Cathedral Hall, William St, 3, 4, 5/9. Fine vandaceous and cattleyas. T. Dean, 201 Grimley St, North Rockhampton. Phone 28 2278. Meets 4th Tues, North Rockhampton Uniting Church Hall, Musgrave St.

South Burnett OS. Sec: L. G. Hunt, 8 Farr St, Kingaroy 4610.

Townsville Orchid and Allied Plants Ass. Show details and confirm meetings contact G. Neilson, PO Box 663, Hermit Park 4812. Meets 3rd Tues at OES Hall, Ingham Rd, 8 pm.

Townsville OS. For show details and confirm meetings contact E. Boon, PO Box 83, Townsville 4810. Meets 4th Fri, Souths Junior Rugby League Hall, Pioneer Park.

Tully & Dis OS. Sec: Mrs E. Gourley, PO Box 648, Tully 4854.

NSW SYDNEY AREA

Orchid Society of NSW. WINTER: Westfield Burwood. Whole week commencing Aug 9 in shop hours. Theme: "Living with Orchids". SPRING: Roselands Shopping Centre, Mon, Sept 20 to 25, shop hours. One of the world's great orchid shows. Theme: "Spirit of Spring". Marshal: Mr C. Willis, phone (042) 84 5321. Meets last Mon at Henley Bowling Club, Crown St, Henley, 8 pm. Sec: Miss B. Oldfield, 61 Mountford Ave, Guildford 2161.

Australasian Native OS. SPRING: Combined show of Sydney and Warringah Groups. Mona Vale Mem Hall, Pittwater Rd, Mona Vale. Sat 11/9, 9 am to 9 pm. Sun, 10 am to 4 pm. Set up noon to 10 pm Fri 10. The only native orchid show held in Sydney area and largest in Australia. Species and hybrids for sale. N. Hilliger, Show Marshal, 99 2468. R. Lowe, Show Sec, 44 3993. Sydney Group meets 2nd Fri, 8 pm at Ryde School of Horticulture, Warringah Group, 2nd Thurs at Thomas Vickers Mem Hall, Pitt and Grainger Sts, Curl Curl. All welcome.

Bankstown OS. WINTER: Scottish Hall, Weigand Ave, Bankstown. Mon 5/7 at 8 pm. SPRING: Scottish Hall, Mon 6/9 at 8 pm. Meets 1st Mon of month at Scottish Hall, Bankstown. Sec: Mr Fred Venturini, 100 Victor Ave, Picnic Point 2213. Phone 772 2290.

Berowra OS. SPRING: Community Centre, Gully St, Berowra. Fri, Sept 10, noon - 9, Sat, 11, 9 - 9. Margaret Barnett, 7 Cullenya Close, Berowra 2081. Phone 456 1764. Meets 3rd Thurs, Berowra Community Centre.

Blue Mountains OS. WESTERN REGION SPRING SHOW. Penrith Plaza, Henry St, Penrith. Mon 13, Sept 9 to Sat, 18 in shopping hours. Includes Western Region Championships. Meets 4th Fri of month, Melrose Hall, Great Western Highway, Emu Plains. Sec: Ralf Terbutt, 33 Joanna St, South Penrith 2750. Phone (047) 36 2230.

Cumberland O Circle. WINTER: Bethlehem Uniting Church, 7 Castle Hill Rd, West Pennant Hills, 10 am to 5 pm, Sat, 24/7. SPRING: Carlingford Court Shopping Centre, Thurs, 26/9, 27/9, 28/9 shopping hours. Sec: Mrs E. Lyttle, 25 Bishop Ave, West Pennant Hills 2120. Phone 84 4611. Meets Bethlehem Uniting Church, 7 Castle Hill Rd, 4th Wed.

Eastern Suburbs OS. WINTER: St Luke's Church Hall, Arden and Varna Sts, Waverley, 8 - 10 pm, 21/6. SPRING: Same place, 8 - 10 pm, 13/9. meets 3rd Mon, St Luke's. Sec: S. Condon, 2 Langlands Rd, Annangrove 2154. Phone 679 1482.

Eastwood O Circle. SPRING: Masonic Hall, Rowe St, Eastwood. Mon, 27/9, 1.30 - 10 pm, 28, 29/9, 10 am - 10 pm, 30/9, 10 am - 9.30 pm. Mrs A. J. Allen, 31 Hampden Rd, Pennant Hills 2120. Phone 84 1903. Meets 1st Wed, Uniting Church Hall, Acacia St, Denistone East.

Five Dock RSL OS. WINTER: Douglas Hall (3 doors from RSL), Wed, July 22, 8 - 10.30 pm. SPRING: Auditorium Birkenhead Shopping Centre, 30/9, 3 pm - 9 pm, 1/10, 9.30 am - 6 pm, 2/10, 8 am - 5 pm, 3/10, 10 am - 5 pm, 4/10, 10 am - 4 pm. Mrs Joyce Levi, 3 Prince Edward St, Gladesville 2111. Meets 4th Wed, Five Dock RSL Club. Show venue may change. Ask for schedule.

Hawkesbury District OS. Richmond Neighbourhood Centre, West Market St. Fri, Sept 3, 10.30 am - 8.30 pm. Sat, 4, 8.30 am - 6.30 pm. Meets 2nd Tues, Richmond Neighbourhood Centre, 8 pm. Sec: Mr Tom Cooper, 'Tomlaine', Bells Line of Road, Richmond 2757.

Lidcombe Hospital OS. SPRING FESTIVAL: Bankstown Square Shopping Centre, Mon, Sept 13 to Sat 18. Shopping hours. Mrs S. Lovell, 12 Brennan St, Yagoona 2199. Phone 644 5549. Meets 2nd Wed at Lidcombe Hospital.

Ku-ring-gai OS. SPRING: Westmead Plaza, Hornsby. Thurs, 26/8 to Sat 28, shop hours. Sec: Jim Brydie, 248 Galston Rd, Hornsby Heights 2077. Phone 476 3383. Meets usually 3rd Mon at Pymble Community Hall, 1035 Pacific Highway.

Manly-Warringah OS. SPRING: Memorial Hall, Pittwater Rd, Mona Vale, 27/8, 1 pm - 8 pm, 28, 29/8, 10 am - 5 pm. Sec: Mr Rod Nelson, 17 Little Willandra Rd, Cromer 2099. Meets 4th Thurs, Community Hall, Oceana St, Narraweena.

North Shore OS. WINTER: Bailey Hall, Chatswood Civic Centre, 2/6. SPRING: Arndale Shopping Centre, Forestway, Wed, 15/9 to 18/9 in shopping hours. A fine show. Sec: Mrs L. Bromley, 43 Ferguson St, Forestville. Phone 452 3202. Meets 1st Wed, Bailey Hall, Chatswood Civic Centre.

Panania-East Hills (RSL) OS. SPRING: Panania Senior Citizens' Centre, Anderson Ave, 18, 19/9, 10 am to 5 pm. Confirm with Sec: Mr W. Coupland, 44 Penshurst Rd, Lakemba 2195. Meets 1st Tues, Panania-East Hills RSL Club, 28 Childs St.

Parramatta OS. WINTER: Wentworthville Community Centre Hall, Darcy Rd, Tues, 27/7, 8 pm. SPRING: Parramatta Westfield Shoppingtown. Mon to Sat, 13-18/9 in shop hours. G. S. Banks, 183 Windsor Rd, Northmead 2152. Phone (02) 639 4815. Meets 4th Tues, Wentworthville Community Centre Hall.

Southern Districts
GREAT COMBINED SHOW
Westfield Shoppingtown, Hurstville
Monday, August 23, to Saturday, August 28. In shopping hours.
Sec: Mr Ron Edwards, 114 Coomong Rd, Gymea Bay 2227. Phone 525 9623.
Combined Societies: St George OS, Bankstown OS, Sydney OS and Cymbidium Club of Australia.

St George OS. WINTER: Uniting Church Hall, Bay St, Rockdale. Tues 6/7, 7.45 pm. Visitors table. SPRING: As above address, 7/9, 7.45 pm. All welcome. Pres: Mr S. Craig, 16 Carrington Ave, Mortdale. Phone 579 2640. Meets 1st Tues, Uniting Church Hall, Rockdale.

Sutherland Shire OS. WINTER: Donnelly Datsun Show Rooms, 509 Princes Highway, Kirrawee, 19/6, 10 am - 7 pm, 20/6, 9 am - 6 pm. SPRING: Same place, 11/9, 11 am - 8 pm, 12/9, 9 am - 6 pm. Mrs G. Withers, 19 Davey Ave, Jannali 2226. Phone 518 9045. Meets 2nd Mon, Gymea Community Hall, Gymea Bay Rd, Gymea.

Sydney Orchid Society. WINTER: Remembrance Hall, 220 Lakemba St, Lakemba. Thurs 10/6, 8 pm. SPRING: Above address, 9/9, 8 pm. Mrs Betty Clare, 75 Quigg St, Lakemba 2195. Phone 759 6616. Meets 2nd Thurs above address.

Western Suburbs OS. SPRING: Woodstock Community Centre, Church St, Burwood. Tues 14/9, 7.30 pm. Members only. S. M. Simpson, 41 Orrington St, Ashfield. Phone 798 7466. Meets 2nd Tues, above address.

NEWCASTLE AND CENTRAL COAST

Newcastle District Combined Societies. WINTER: Garden City, Kotara, benching 11/7, 12-17/7. SPRING: Garden City Shopping Centre, benching 27/9, Tues 28 to Fri, 1/10. Contact Frank and Daphne Dobell, 37 Nelson St, Barnsley. Phone (049) 53 2019. Com Soc meet 1st Mon every second month, Teralba Community Hall.

Newcastle OS. SPRING: St Andrews Hall, Lamen St, Newcastle, Wed, 8/9, 1 - 9 pm, Thurs, Wed and Sat, 9 am - 9 pm. Sec: Mrs M. Parlour, Box 301, PO Mayfield. Phone 43 3824. Meets 3rd Wed, Scouts Hall, Station St, Waratah.

ANOS Central Coast Group. SPRING: Scout Hall, Gertrude Place, Gosford. Sat, Sept 4, 10 am - 6 pm. Sec: Mrs B. D. Johnston, 158 Geoffrey Rd, Chittaway Point 2259. Phone (043) 88 1785. Meets 2nd Wed, Baptist Church Hall, York and Frederick Sts, East Gosford.

Boolaroo OS. SPRING: Jesmond Centre, Blue Gum Rd, Jesmond. Thurs, 16/9 to Sat, 18. Shop hours. Meets Teralba Community Hall, 1st Wed in month. Sec: M/s H. Haynes, 116 Main Rd, Speers Point 2284. Phone (049) 58 1148.

Gloucester & Dis OS. SPRING: Gloucester Bowling Club. Sat, 18/9, 9 am - 9 pm. Sec: Mrs T. Littlewood, 42 Philip St, Gloucester. Phone (065) 58 1950. Meets 1st Thurs, Queen St, Gloucester.

Gosford & District OS. WINTER: Mon, 12/7 to Sat, 17/7. Shop hours in Marketown, Gosford. SPRING: Mon, 13/9 to Sat, 18/9. Shop hours in Marketown. Always a bright show. Sec: L. Pascoe, PO Box 541, Gosford 2250. Phone (043) 41 6425. Meets 4th Wed, Baptist Church Hall, East Gosford.

Maitland & Coalfields OS. SPRING: Sharton Motors, High St, Maitland (opposite Town Hall). Thurs, Sept 16 to 18, 9 am - 9 pm daily. E. Hunt, Windermere Rd, Lochinvar 2321. Phone (042) 30 7300. Meets 2nd Thurs, Literary Institute, Banks St, East Maitland.

Morisset OS. SPRING: Charlestown Square Shopping Centre, benching 24/8, 25-28/8. P. Bond, Lot 1 Baldwin Blvde, Windermere Park 2264. Phone (049) 73 3262. Enquire re Winter Show. Meets 3rd Mon, C of E Hall, Bridge St, Morisset.

Tamworth OS. SPRING: Myers Store, 369 Peel St. Fri, 24/9, noon to 5 pm; Sat, 25/9, 9 am - 11 am. M/s M. Drewe, 13 Cohen St, Tamworth 2340. Phone (067) 66 3316. Meets 3rd Wed, Centre for Continuing Education, 81 Brisbane St.

NSW NORTH COAST

Alstonville OS. SPRING: Catholic Hall, Main St, Alstonville, Sat, 4/9, 8 am - 5 pm. Mrs L. G. Overall, 4/17 Kyla St, Alstonville 2477. Phone (066) 28 0408. Meets 2nd Wed, Catholic Hall.

Ballina OS. SPRING: Community Centre, Cherry St, Ballina Hospital, Fri, 10, Sat, 11/9. Sec: Mrs J. Hicks, 89 Swift St, Ballina 2478. Meets 1st Sat, Community Health Centre at 2 pm.

Byron Dis OS. SPRING: Uniting Church Hall, Dalley St, Mullumbimby. Fri, 17/9 and Sat, 18/9. Sec: Mrs E. Summers, Federal via Lismore 2480. Meetings rotate UC Hall, Mullumbimby; CWA Hall, Byron Bay; RSL Hall, Bangalow, 2nd Mon night of month.

Casino OS. SPRING: RSL Hall, Canterbury St, Fri, 24/9, 1 - 9 pm, 25, 9 am - 5 pm. Sec: Mrs P. Fraser, Box 394, Casino 2470. Phone (066) 62 1542. Meets 4th Fri, Old Bowling Club House, Convent Pde.

Coffs Harbour OS. SPRING: Supper Room, Civic Centre, Gordon St, Fri, Sat, 3-4/9, 9 am - 9 pm. Sun, 5/9, 9 am - 2 pm. Open show, set up Thurs night. Fine, well-displayed orchids. S. Clemesha, Lot 6 Skinner Place, Avocado Heights, Woolgoolga 2456. Phone 53 6151 (Pres). Meets 1st Thurs, Cavanbah Hall, High St.

Evans Head OS. SPRING: Memorial Hall, River St, Woodburn. Sat, 18/9, Sun, 19/9. Sec: Mrs N. F. Lindsay, Pine St, Wardell 2477.

Grafton OS. SPRING: Parish Hall, Duke St. Fri, 24/9, noon - 9 pm, 25/9, 9 am - 9 pm, 26/9, 11 am - 6 pm. N. Skennar, PO Box 351, Grafton 2460. Phone (066) 42 3813. Meets 3rd Wed except Sept and Jan in St Marks Hall, Fry St.

City of Lismore OS. Sec: Mrs M. Gamble, 26 Murray St, Lismore 2480. Phone 21 6386. Meets 3rd Tues, Red Cross Rooms, Keen St.

Manning River OS. Sec: K. G. Ringrose, PO Box 126, Wingham 2429. Phone (065) 53 4872. Meets Taree Pre-school, Macquarie St, 1st Fri.

Tweed District OS. SPRING: Either late Aug or early Sept. In conjuction with Tweed Banana Festival. Meets 3rd Thurs, CWA Rooms. Sec: Mr D. Capner, Kiel Vale via Murwillumbah 2484. Phone 72 1375.

6th NSW ORCHID CONFERENCE SHOW

Hastings River OS. SPRING: Wauchope Stadium. Sat, 2/10, 11 am - 9 pm, 3/10, 9 am - 6.30 pm, 4/10, 9 am - 4 pm. Mrs M. Graham, PO Box 193, Wauchope 2446. Phone (065) 83 1552. Meets 2nd Fri, Hastings St, Uniting Church Hall.

NSW SOUTH COAST

Campbelltown OS. WINTER: McArthur Square. Thurs, 15/7 to Sat, 17/7. High class. SPRING: Same venue 23/9 to 25/9. Splendid natives. Sec: E. Fish, 10 Yarrangobilly St, Heckenberg 2168. Phone 608 1672. Meets 2nd Tues, Beverly Park School.

Corrimal OS. WINTER: Warilla Grove Shopping Centre. Wed, 28/7 to Sat, 31/7. Shop hours. SPRING: Orchid fantasia. Corrimal Court Shopping Centre. Wed, 8/9 to Sat, 11/9. Shop hours. Sec: Mrs M. Ransley, 6 Coolgardie St, Corrimal 2518. Phone (042) 84 2332. Meets 2nd Wed, Masonic Hall, Railway St, Corrimal.

Griffith OS. SPRING: Wade High School Hall. Sat, 2/10 and Sun, 3/10, both 9 am - 5 pm. Sec: M/s M. Wynne, PO Box 1944, Griffith 2680. Meets 1st Mon, St Albans Hall, Griffith.

Illawarra OS. WINTER: Warrawong Shopping Centre. Thurs, 22/7 to Sat, 24/7 in shop hours. Good early orchids. SPRING: Same venue. Thurs, 26/8 to Sat, 28/8. Shop hours. Best show on the coast. J. R. Hinton, 8 Antrim Ave, Warilla 2528. Phone 96 2171. Meets Wenham Park Oval Cottage, CFM, Old Port Kembla Rd on 3rd Tues.

Shoalhaven OS. WINTER: St. Andrew's Presbyterian Church Hall, Kinghorn St, Nowra. Thurs, 8/7, noon - 9. SPRING: Above address 17/9, 12.30 - 9 pm, 18/9, 9.30 - 6 pm. Sec: Mr S. Crowther, 4 Amber Place, Bomaderry 2541. Worthy show. Meets 1st Mon, St Andrew's Pres Hall.

South Coast OS. Sec: Mrs W. Williams, 39 Outlook Drive, Figtree 2525. Phone 28 4947. Meets 1st Mon, United Church Hall, Russel St. Corrimal.

Southern Riviera OS. SPRING: Civic Centre, Ulladulla. Sat, 2/10, 11 - 7, Sun, 3/10, 10 - 4. Mrs M. Carter, PO Box 124, Milton 2538. Phone 55 2196. Meets 1st Fri, Kendall Cottage, Ulladulla.

Wollongong & Dis Native OS. SPRING: Regional Shopping Centre, Warrawong. Shop hours. Sec: Mrs E. Beileiter, 19 London St, Berkeley 2506. Meets 2nd Tues in Meeting Room, Wollongong Town Hall.

VICTORIA

Victorian Orchid Club. Sept 10 to 12. For show details contact Mrs Ita Hutchins, 37 Elliott St, Mordialloc 3195. Phone (AH) 90 4817.

ANOS Victorian Group. SPRING: National Herbarium, 2 and 3/10, 10 am - 6 pm each day. Sec: Mr Clive Lloyd, 17 Leonard Close, South Clayton 3168. Phone 551 4923. Meets 1st Fri, National Herbarium.

Ararat OS. SPRING: Ararat Arts Activity Centre. Fri, 29/10 and Sat, 30/10, 9 am - 6 pm; Sun, 9 am - 5 pm. Sec: Mr R. Selwood, Picnic Rd, Ararat 3377. Phone (053) 52 1945. Meets 2nd Fri, Church of Christ Hall.

Geelong Orchid Club. SPRING: Centenary Hall, Cox Rd, Norlane. Sat, 9/10 and Sun, 10/10. Sec: L. J. Dale, 88 Albert St, Geelong West. Meets 1st Thurs, TPI Hall, 61 Myers St, Geelong.

Gippsland OS. SPRING: St Andrews Church Hall, Traralgon. Fri, 17/9, 9 am - 9 pm; 18/9, 9 am - 5 pm. Set up deadline 9 pm, 16/9. Sec: H. J. Jacobs, PO Box 110, Stratford 3862. Phone (051) 45 6371. Meets 2nd Mon, Continuing Education Centre, Sale.

Goulburn Valley OS. Venue not advised. Sat, 18/9, 11 am - 5 pm. Meets 1st Thurs. For details contact N. Nicholson, "Woorals", Arcadia 3613. Phone (058) 23 1485. Interesting monthly meetings.

Maribyrnong OS. SECOND ANNUAL SHOW. Old Shire Hall, Keilor. Sat, 18/9, 9 am - 9 pm. Sun, 19/9, 10 am - 5 pm. Sec: Ms L. Scott, 7 Rainbird Court, Keilor Downs 3038. Phone 366 9060 for show and meeting night details.

Midlands OS. SPRING: RSL Hall, Castlemaine. Fri, 22/10 and Sat, 23, 10 am - 9 pm. Society's first show, non-competitive. Sec: G. Sobers, Midland Highway, Castlemaine 3450. Phone (054) 72 3167. Meets 2nd Tues, 8 pm, at Education Centre, SEC Building, Castlemaine. A new society with enthusiastic members.

Mornington Peninsula OS. SPRING: St Paul's Church Hall, Frankston, 9-10/10. Hon Sec: L. G. Smith, 13 Glamis Ave, Victoria 3188. Meets 4th Fri, St Paul's C of E Hall, Bay and High Sts.

Ringwood OS. ORCHIDS FOR THE EIGHTIES. Myer Eastland Shopping Centre. Set up Tues, 28/9. Open Wed, 28/9 to Sat, 2/10. Shop hours. This was a very big show last year with big prizemoney. Sec: Mrs V. O'Keeffe, 451 Dorset Rd, Croydon 3136. Meets 1st Tues, Maroondah High School Community Centre, Maroondah Highway, East Ringwood.

Maroondah OS. SPRING: Vermont High School Theatre, Morack Rd, Vermont. Benching 1/10, Sat, 2/10, Sun, 3/10. Sec: Judy Doran, 14 Roma St, Scoresby 3179. 763 5341. Meets 3rd Fri, Vermont High School Theatre.

Melbourne Eastern OS. WINTER: St Johns Hall, Camberwell 28/6. SPRING: "World of Orchids 1982", Chadstone Shopping Centre, Dandenong Rd, Wed-Sat, 15-18/9, 10 am - 10 pm. Sun, 19/9, 10 am - 4 pm. Meets last Mon, St John's Hall, 8 pm. Sec: A. F. Wilson, 1 Arthur St, Murrumbeena 3163. Phone 569 7689.

Warringal OS. WINTER: Heidelberg Masonic Temple, Lower Heidelberg Rd (near Burgundy St), Heidelberg. SPRING: East Preston Technical School, Murray Rd, Sat, 9/10, 10 am - 9 pm. 10/10, 10 - 5 (next door Northland Centre). Mrs M. Murray, 60 McArthur Rd, East Ivanhoe 3079. Phone 49 3408. Meets 3rd Wed, Masonic Temple, Heidelberg.

SOUTH AUSTRALIA

Orchid Club of SA. WINTER: Catholic Church Hall, 500 Portrush Rd, Glen Osmond, Sat, 10/7, noon - 6 pm. 11/7, 11 am - 4.30 pm. Trading table and tea and biscuits. SPRING FESTIVAL: John Martin's Auditorium, North Tce, Adelaide, 20/9, 9 am - 5.30 pm, 21, 22, 23, 24/9, 9 am - 9 pm. 25/9, 8.30 - 11.30 am. Proceeds to St John Ambulance. Hon Sec: Mr D. J. Harris, 36 East Ave, Black Forest 5035. Phone 297 7525. Meets 1st Thurs, Australian Mineral Foundation.

Gawler Dis O Club. WINTER: Masonic Hall, Lyndock Rd, Gawler. Thurs, 8/7. SPRING: Datsun Motor Showroom, Main St, Gawler. Sat, 2/10 and Sun, 3/10. Sec: J. L. Hebberman, PO Box 87, Freeling 5372. Phone (085) 25 3101.

Mount Gambier OS. SPRING: SE Land Home Centre, Sturt St, Mon, 27/9 to Sat, 2/10 in shop hours. Sec: Miss M. E. Franklin, 4 Wehl St South, Mt Gambier 5290. Phone (087) 25 2901. Meets 4th Mon except Dec and Jan in St Martin's Church Hall, Edward St, Mt Gambier.

Native OS of SA. SPRING: Goodwood Orphanage Education Centre, 181 Goodwood Rd, Millswood. Sat, 18/9 and Sun, 19/9. Sec: E. Hargreaves, 1 Halmon Ave, Everard Park 5035. Meets 4th Tues, St Matthews Hall, 67 Bridge St, Kensington. Also shows in conjunction with SGAP in Walter Duncan Hall, Showgrounds, Wayville. Sat, 25/9, 10 am - 6 pm and Sun, 26/9, 1 pm - 5 pm.

Northern and Eastern Districts OS. WINTER: St Phillip's Parish Hal, Galway Ave, Broadview. Fri, 16/7, 10 am - 9 pm and Sat, 17/7, 10 am - 9 pm. SPRING: Same venue. Thurs, 2/9 to Sat, 4/9, each day 10 am - 9 pm. Sec: J. Keen, 22 Campbell St, Oaklands Park. Phone (08) 296 4476. Meets St Philip's Hall, 3rd Thurs, 8 pm.

Port Augusta O Club. SPRING: Held in conjunction with Port Augusta Garden Club, Cooindo Hall, Commercial Rd, Port Augusta. Sat, 4/9, 12.30 - 10 pm, Sun, 5/9, 10 am - 10 pm. Sec: M. Jones, 10 McLeay St, Port Augusta 5700. Meets 4th Wed, Dept of Community Welfare, El Alamein Rd. Formed only three years ago this is a very progressive club.

Port Lincoln O Club. SPRING: Port Lincoln Showground. As part of A&G Society Show, Ravendale Oval. Sat, 23/10, 1 pm - 5.30 pm, 9 am - 4.30 pm. The club is also staging an exhibition in the CWA Hall on Fri, 24/9. Sec: Mrs K. Castley, PO Box 90, Port Lincoln 5606. Phone (086) 82 3417. Meets last Fri of month at Eyre Peninsula Community College.

Riverland OS of SA. SPRING: 11/10 in conjunction with Loxton Agric & Horticultural Show. Contact Sec Max Pfeiffer, Box 484, Loxton 5333.

South Coast Orchid Club of SA. WINTER: "Collanades", Noarlunga Centre, 19-24/7, shop hours. SPRING: Same place, 4-9/10 shop hours. Grand opening 4th, 3 pm. Floral art a feature. Plants and blooms on sale. Sec: Mrs S. J. Stirling, 63 Norrie Ave, Clovelly Park 5042. Phone 277 3830. Meets 2nd Tues, Lutheran Church Hall, Windsong Court, Christies Downs.

SA Orchidaceous Society. WINTER: Thebarton Assembly Hall, South Rd, Torrensville, 24/7, 1 - 7 pm, 25/7, 11 - 4. Proceeds to Thebarton Community Hospital Women's Auxiliary. SPRING: Westfield Shoppingtown, Arndale Centre, Kilkenny. 13-18/9 shop hours. Proceeds to Adelaide Children's Hospital. Mrs E. Shawyer, 60 Balfour St, Nailsworth 5083. Phone 44 4260. Meets 3rd Wed, Thebarton Assembly Hall, South Rd, Torrensville.

Whyalla O Club. DISPLAY. Agricultural Society Show. Jubilee Park, 21/8, 10 am - 10 pm, 22/8 do. SPRING: Westlands Mall, Whyalla. Thurs, 16/9 to Sat, 18/9. Shop hours. Corsages, etc made to order at show. Sec: M/s S. Gault, PO Box 566, Whyalla 5600. Phone 45 4740. Meets 3rd Wed at Left Hand Club, Dick St, Whyalla.

TASMANIA

Tasmanian OS. SPRING: Town Hall, Macquarie St, Hobart. Fri, 8/10, 1 - 9 pm, Sat, 9/10, 9 am - 9 pm. Sun, 10/10, 10 am - 5 pm. Mainlanders should plan their holidays to take in this show. Sec: J. F. Smith, 11 Warren Court, Howrah 7018. Phone (002) 44 1555. Meets 4th Fri, RSL Club Rooms, 6 Victoria St, Hobart.

Devonport OS. SPRING: Spreyton Hall, Spreyton. Fri, 1/10, 2 - 9 pm, Sat, 2/10, 10 am - 8 pm, Sun, 3/10, 10 am - 5 pm. Sec: Mrs G. Smith, PO Box 793, Kindred 7310. Meets 3rd Wed, Don College, Watkinson St, Devonport.

Launceston OS. SPRING: Windmill Hall, High St, Fri, 8/10, 2 - 9 pm. Sat, 9.30 am - 9 pm, Sun, 10/10, 9.30 am - 9 pm. Set-up Thurs, 7/10. Sec: R. Clark, 13 Vale St, Prospect Vale 7250. Phone (003) 44 2957. Meets 3rd Tues, Anzac Hostel, Patterson St, Launceston.

Orchid Society of North-West Tasmania. SPRING: Adult Education Centre, North Tce, Burnie. Thurs, 15/10, 2 - 9 pm, Fri, 16/10 and Sat, 10 am - 9 pm, Sun, 18/10, 10 am - 4 pm. Sec: Mrs M. Nutting, 21 Bay St, Parklands, Burnie 7320. Phone 31 5849. Meets 2nd Mon, 7.30 pm, Hellyer College, Mooreville Rd, Burnie.

Scottsdale OS. Sec: W. Pinner, C/-PO, Karoola 7254.

WESTERN AUSTRALIA

Orchid Society of WA. WINTER: Garden City Shopping Centre, 125 Risley St, Booragoon. July 14 to 17, set-up 13/7. SPRING: Same venue, Sept 22 to 25, set-up 21/9. Mr J. Foley, 39 Stirk Rd, Alfred Cove 6154. Phone 330 2132. Meets 4th Fri, Institute of Engineers Hall, 712 Murray St, West Perth.

Albany OS. Meets at 75 Seymour St, Albany, 4th Wed, 8 pm. Sec: Mr B. Newman, PO Box 13, Albany 6330. Phone (098) 41 5670.

Bunbury OS. WINTER: Bunbury Forum. Thurs, 29/7 to Sat, 31. SPRING: Bunbury Forum, Thurs, 30/9 to Sat, 2/10. Both shows in shop hours. Bumper shows to celebrate 10th anniversary. Sec: Mrs D. Hays, 18 Eagle Cres, Eaton 6232. Phone (097) 25 1495. Meets 1st Tues, Walker Memorial Hall, Bunbury.

Melville Dis OS. SPRING: Roy Edinger Hall, Stock Rd, Palmyra. Sat, 4/9, 1 - 8 pm, Sun, 9.30 am - 4.30 pm. Sec: R. Lander, 29 Tain St, Applecross. Phone 364 2937. Meets Roy Edinger Hall, 2nd Thurs.

Northern Districts OS. WINTER: Morley City Shopping Centre, Thurs, 22/7 to Sat, 24. SPRING: Karrinyup Shopping Centre. Thurs, 16/9 to Sat, 18. Both shows in shopping hours. Meets 4th Mon, Alf Faulkner Hall, Eden Hill. Sec: Mrs L. Rowe, 4 Ash Way, Morley 6062. Phone 276 8138.

Wanneroo OS. Meets Lesser Hall, Wanneroo Civic Centre, 3rd Thurs, 8 pm. Sec: Mr R. Stapleton, 11 Chrysostum St, North Beach 6020. Phone 447 6821.

WA Native Orchid Study & Conservation Group. Meets in Theatrette, Dept of Agriculture, Jarrah Rd, South Perth, 3rd Wed, 8 pm. Sec: Mr N. Hoffman, 25 Brine Rd, Kalamunda 6076. Phone 293 3058.

Orchid Society of the NT. GARDEN FAIR. Darwin Botanical Gardens, Sat, 3/7 and Sun, 4/7, 9 am - 6 pm. Display and trading table. ROYAL DARWIN SHOW, Showgrounds, Winnellie. Thurs, 22 to Sat, July 24, each day 10 am - 10 pm. Non-competitive display by OSNT. Orchid competitive classes in horticultural section. Meets 1st Mon in members' gardens. Sec: Mr A. McGregor, PO Box 38493, Winnellie, NT 5789. Phone 81 8436, AGM 3/5/82.

Nightcliff OS. Sec: Mrs M. Cailler, PO Box 41165, Casuarina, Darwin 5794.

Orchid Society of South-East Asia. ANNUAL SHOW. Sun, Sept 5. The Secretary, PO Box 2363, Singapore 1025.

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September Quarter 1982
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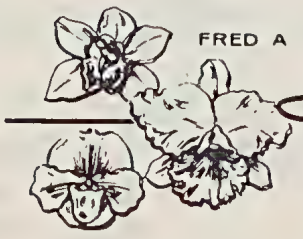
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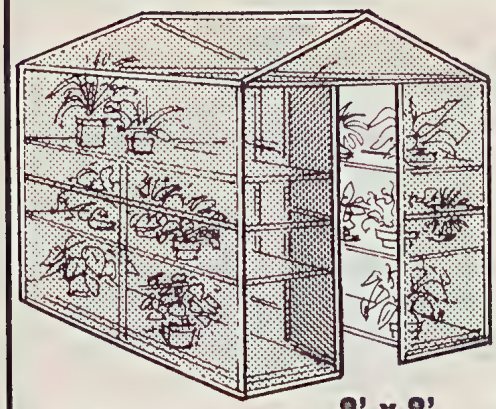
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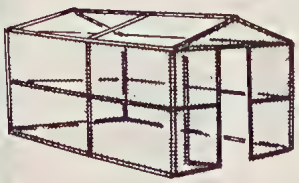


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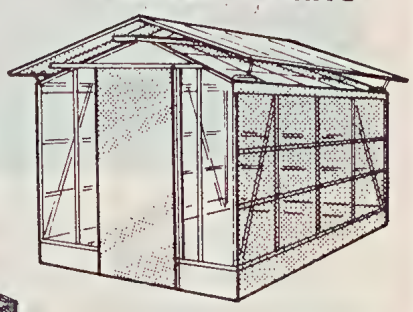
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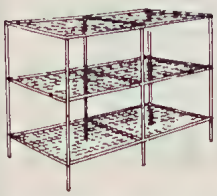


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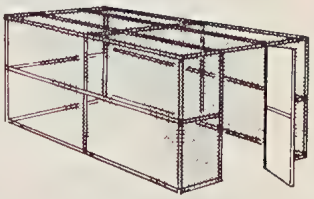
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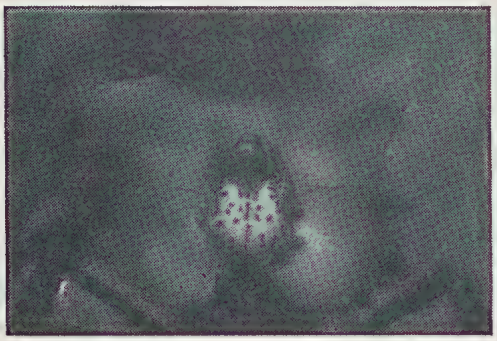
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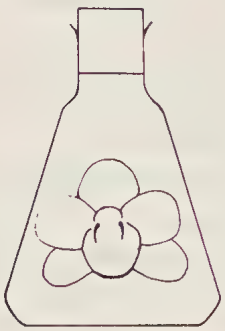
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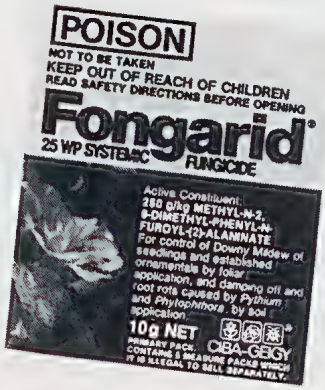
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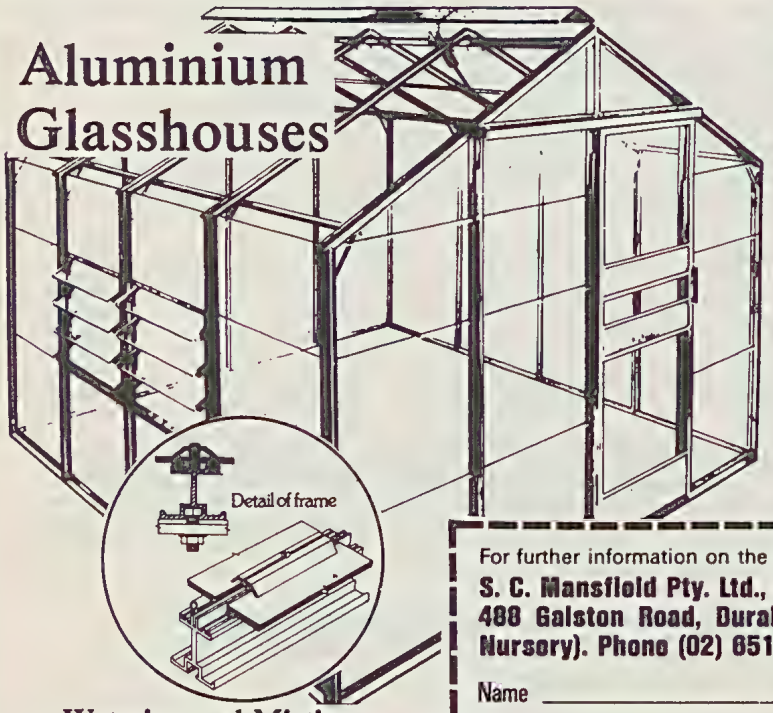
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SUSAN HUGHES 'R.D. HUGHES'
TAL CRAIG 'SUTHERLAND'
TAPESTRY 'COBURG'
TAPESTRY 'ZITA'
TERAMA 'ROBIN ' 4N
TERAMA 'YOWIE BAY'
TETHYS 'BLACK MAGIC'
TETHYS 'LITTLE FIREBALL'
VANGUARD 'CHRISTMAS BEAUTY'
VALLEY CONQUEST 'MARGARET'
VALLEY PROMISE 'REYNELLA' 4N
VALLEY GEM 'MAYFAIR' 4N
VALLEY SONG 'MAUREEN'
VOLCANO 'MENEHUENE'
VALYA CRAIG 'SUTHERLAND'
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MS.653 DEN. MALONES 'OKAYAMA' — *red-lavender/yellow lip*..... **4½" pots**
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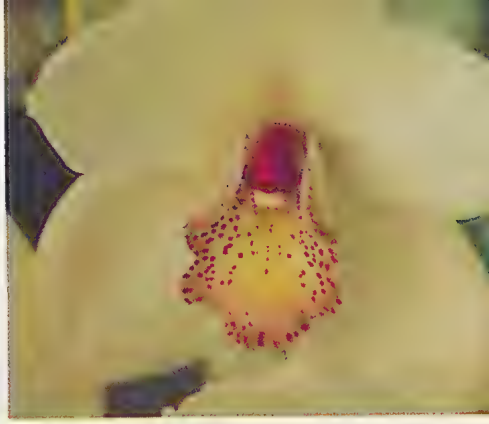
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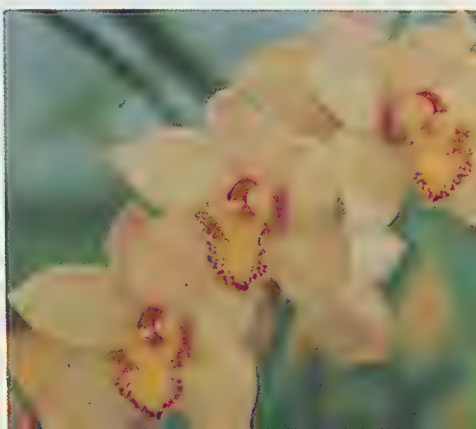
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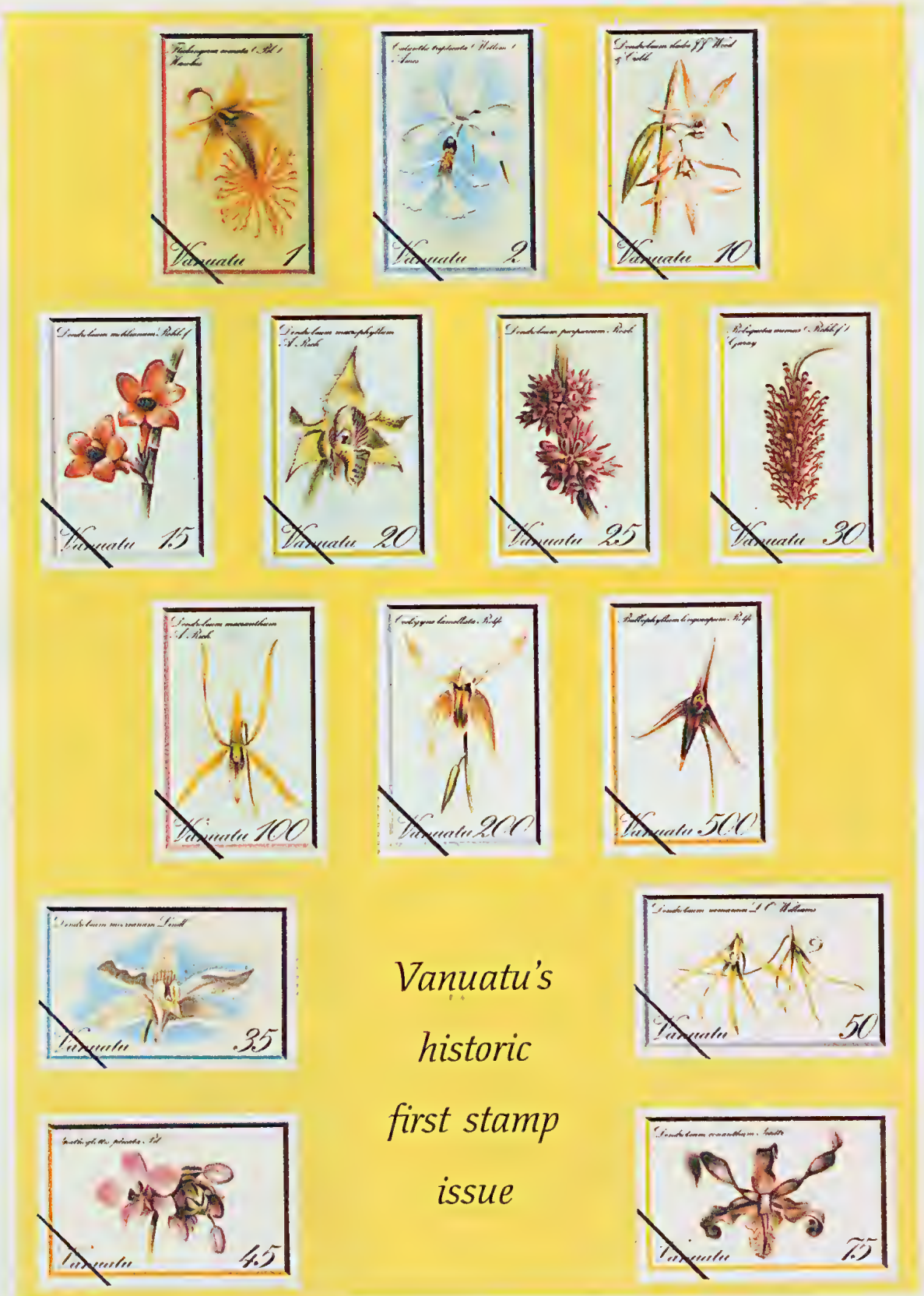
ARCADIAN MELODY x WIENNA var. 'KEITA'



SLEEPING BEAUTY x (WYANGA DURHAM CASTLE) var. STARTLE



SYLVANIA x BALTIC var. ELEGANCE


Vanuatu 1
Vanuatu 2
Vanuatu 10
Vanuatu 15
Vanuatu 20
Vanuatu 25
Vanuatu 30
Vanuatu 100
Vanuatu 200
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Vanuatu 35
Vanuatu 50
Vanuatu 45
Vanuatu 75
Vanuatu's
historic
first stamp
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AUSTRALIAN Orchid REVIEW

SEPTEMBER QUARTER
Vol. 47 No. 3

- **Editorial Associates:**
QUEENSLAND: Mr Frank Oelkers, 419 Robinson Road, Geebung 4034.
VICTORIA: Mrs I. Hutchins, 37 Elliot Street, Mordialloc, Victoria 3195.
SOUTH AUSTRALIA: Mrs Joan McLean, 7 Clearview Crescent, Clearview 5085.
WESTERN AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154.
TASMANIA: Mr C. Nicholas, 7 Kelvin Avenue, Moonah, Tasmania 7009.
INTERNATIONAL: Mr G. H. Slade.
- **Editor: Ronald Kerr.**
- **Editorial Committee:**
R. KERR, S. WALDIE
G. HANSEN, D. SYMONDS
R. MILLER
- **Address Editorial to:**
R. KERR, 260 Geoffrey Road
Chittaway Point, NSW 2259
Phone: (043) 88 2605

ADVERTISING: Please contact Elizabeth Lowe, Publication Manager, AOR, 14 McGill Street, Lewisham, NSW, Australia 2049.

SUBSCRIPTIONS: Full year **ENDING** December 1982 $11.00 within Australia $13.00 or $US16.00 overseas surface mail. Full year **ENDING** December 1983 $14.00 within Australia $16.00 or $US18.50 overseas surface mail. Airmail rates on request. Payment with order to Subscriptions, AOR, 14 McGill St, as above.

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NSW: Miss B. Oldfield, 61 Mountford Avenue, Guildford 2161.

QUEENSLAND: Mr W. Murphy, GPO Box 2002, Brisbane. Phone: 377 3253.

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SOUTH AUSTRALIA: Mr D. J. Harris, 36 East Avenue, Black Forest 5035. Phone: 297 7525.

WEST AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154. Phone: 330 2132.

TASMANIA: Mr J. F. Smith, 11 Warren Court, Howrah 7018. Phone: 44 1555.

NORTHERN TERRITORY: Mr A. McGregor, PO Box 38493, Winnellie 5789. Phone: 81 8436.

Printed and Published by:
GRAPHIC WORLD
14 McGill Street, Lewisham 2049
560 6166

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Dendrobium thyrsiflorum — Ten Year-old Plant from a Selfing* FC
*Colour.

To comply with the International Code of Botanical Nomenclature the whole of a species name is in *italics* and the second term has no capital. With hybrids only the first term is in *italics*, the second starts with a capital and is not latinised. Generic names, used in a non-botanical sense do not have a capital nor are they in italics. In society bulletins and on place cards italics can be indicated by underlining.

COVER STORY

This magnificent *Dendrobium thyrsiflorum* specimen reflects the growing skill of Mr Ruben Brandt of Brisbane. It was shown at the Redlands Horticultural Society last November as a non-competitive entry. It carried 68 thyrses of blooms each with 32 to 37 flowers. It was bought as a small seedling in 1971, and when photographed was in a 25 cm plastic pot. Three years before it had been potted on into a dried cane-like native grass which had been soaked then packed in tight around it. It was grown under 81 per cent shadecloth except for a period under a shady tree during July. It received two doses of three-month Osmocote plus fortnightly feedings of fish emulsion at roots. Manuring stopped when buds showed signs of swelling and splitting. It was heavily watered every second day, but only twice weekly at bud-swelling stage. It has now been potted up into cork only.

Vanuatu Orchid Stamps are Unique

RONALD KERR

The first series of stamps issued by newly-independent Vanuatu has designs based on indigenous orchids. Thus the fourteen stamps not only have aesthetic appeal but historical significance as well.

Each stamp is illustrated in natural size. The black diagonal band does not appear on the real stamps but is a device to prevent the original transparencies being used to produce forgeries.

Artwork for these beautiful stamps was carried out by English artist Jennifer Toombs. But before the artwork stage much work had to be done. Mr G. Hermon Slade, who is so well known throughout the orchid world, played a big part in interesting the Vanuatu authorities towards using an orchid series for this first issue.

Mr Slade has lived for many years in Vila, Vanuatu, and not only maintains a magnificent orchid garden, but has actively researched the indigenous orchids of the area. He has greatly assisted visiting botanists, including only recently, Dr Peter Cribb of Kew.

In collaboration with a local nurseryman, Mr R. Lambert, Mr Slade selected the species which represented an attractive cross-section of Vanuatu genera.

The next step was to send these specimens to Kew so that nomenclature could be checked.

To everyone's surprise one of these specimens turned out to be a new species. On learning of this I wrote to Dr Peter Cribb of Kew for further information and was informed it had been named *Dendrobium sladei*. Dr Jeffrey Wood of Kew forwarded a full description and illustrations. This description was in the June issue.

Eight of the values in the issue of fourteen stamps depict dendrobiums.

Dendrobium macrophyllum A. Rich. (20 Vt) and *D. mooreanum* are both species within the Latourea section. The former extends from Fiji to Papua New Guinea, the latter is found only in Vanuatu and the Solomons.

D. purpureum Roxb. (25Vt) is a species closely related to *D. bracteosum* of Papua New Guinea, a plant in many Australian collections. They come within the section Pedilonum. The 15 Vt value, *D. mohlianum* Rchb.f., grows in cool mountain regions of Fiji, through Vanuatu to PNG.

D. conanthun Schlr. (75 Vt) is the most obvious Ceratobium section species pictured. It is well known in New Guinea and its habitat extends to Fiji. *D. macranthum* A. Rich. is structurally a less obvious Ceratobium. Its distribution is centred in Vanuatu.

Our Australian *D. teretifolium* R. Br. is very closely related to *D. seemannii* L. O. Williams (50 Vt) and could easily be mistaken for *D. teretifolium* var. *fairfaxii* fma. *aureum*.

D. sladei J. J. Wood & Cribb (10 Vt) was illustrated and described in the June quarter issue. While very common in Vanuatu it was not realised that it was unnamed until the Kew botanists came to examine it. In Vila the pendulous leafing stems hang like curtains from branches of trees. The flowers last less than a day. This is probably the reason it went unrecognised, since the foliage is similar to other dendrobiums.

The remaining six stamps all come from different genera.

Coelogne lamellata Rolfe (200 Vt) grows on mountain ridge top trees in Vanuatu and is similar to *C. beccaria* of Papua New Guinea. It carries three to five flowers to a stem but usually only one opens at a time.

Bulbophyllum longiscarpum (Rchb.f.) Garay (500 Vt). This species has limited distribution but the genus is the largest in the family Orchidaceae.

Robiquetia mimus (Rchb.f.) Garay (30 Vt). *Robiquetia* is a small genus widely distributed in Asia, but this species seems confined to the Vanuatu region. The bottle-brush type pendulous flower cluster of *R. mimus* is particularly attractive.

Calanthe triplicata (Willem.) Ames (2 Vt) is one of the most widely distributed of all species. It is a terrestrial ranging from China, through India and Malaysia, to Australia.

Spathoglottis plicata Bl. (45 Vt). This hardy terrestrial grows in large colonies in its habitat. It is recorded from Malaysia, Sumatra, the Philippines and Pacific islands. There is much formal variation in the flowers which form an attractive cluster. Colour varies too, from white to pinks, mauves, purples and yellows.

In Vanuatu stands of *S. plicata* cover open savannah areas, often where volcanic ash is present.

Flickeringia comata (Bl.) Hawkes appropriately carries its one Vatu value in keeping with its fleeting one-day flowers. This species has gone through ten name changes. While closely allied to *Dendrobium* it is distinguished from that genus by progressive pseudobulbs extending along the stems in decreasing sizes. Also by the remarkable cluster of thick hairs extending from the mid-lobe of the labellum. Habitat range is from Pacific islands to Queensland. It is rare in the McIlwraith Range of Central Cape York. In

Australia it is more commonly known under its synonym of *Ephemerantha comata*.

This series conveys a splendid visualisation of the orchids from one of our interesting, and near, Pacific neighbours. To examine the whole set in detail is to learn more about the distribution of genera and their relationship, and hence the whole wonderful world of nature.

PRODUCTION FACTS

The stamps were released on June 15 last. First day covers may still be available. Sheets comprise 50 stamps in two panes of 25. They were printed in Holland from designs by Jennifer Toombs. Size is the same as illustrated. The black diagonal lines are not on the original, they prevent the transparencies used in reproduction being used to make forgeries.

Values are shown in Vatus, the unit of Vanuatu currency. Vt is the abbreviation. One vatu is equal to one Australian cent.

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THE STAMP BOTANISTS

After each orchid name on a Vanuatu stamp is the abbreviation of a botanist's name. This is the correct way to give a correct name in full. It enables a researcher to trace the history and morphology of the orchid. The better known the botanist the shorter the abbreviation. The botanist is the one who first named the species. In some cases a name is shown in brackets, followed by another. This indicates that the orchid was first named by the author whose name is in brackets, but corrected by the second-named authority.

A. Rich.: Achille Richard was a French botanist of the early 19th century.

Lindl. is for John Lindley, the world's first great orchid authority.

Roxb. stands for William Roxburgh, a Scottish botanist who lived for a time in India. He introduced into England the first living specimens of East Indian vandas and aerides, also many dendrobiums.

Rchbf.f. on stamps is usually written Reichb.f. and stands for Heinrich Gustav Reichenbach, a German who succeeded John Lindley as world orchid authority. The f. is for filius, the latin for son, used to distinguish him from his father who was also a famous botanist.

Schlr. indicates Friedrich Richard Rudolph Schlechter, the great German orchid classifier of this century. His *Orchids of German New Guinea* is about to be published in English by the Australian Orchid Foundation.

L. O. Williams, sometimes written Wms. L.O., is for Dr Louis Otho Williams. He became editor of the *American Orchid Society Bulletin* when it became a monthly in 1940. In 1942 the US government sent him to Brazil for work on the production of rubber.

J. J. Wood & Cribb. Two present-day Kew botanists.

Rolfe. Robert Allen Rolfe was founder in 1893, and for 28 years, editor of the English *Orchid Review*. He served as a botanist at Kew for 40 years and became recognised as successor to Reichenbach as world orchid authority.

Garay. Leslie Arthur Garay. Currently Director of the Orchid Herbarium of Oakes Ames, Botanical Museum, Harvard University, Mass. USA.

Willem. Abbreviation for Pierre Remi Willemet, a French botanist of the late 18th century.

Ames. Professor Oakes Ames of Harvard University is famous for orchid and economic botany. He directed the Botanical Museum of Harvard University, and founded and financed the Orchid Herbarium of Oakes Ames.

Bl. Karl Ludwig Blume. Born in 1796 at Brunswick, Germany, Blume became Director of the Buitenzorg Botanic Garden, Java, in 1822. He wrote extensively on Javanese orchids. His *Flora Javae* became the basic work on East Indian plants. He was appointed Director of the State Herbarium at Leyden, Holland in 1829.

R. Br. This symbol for Robert Brown is not on any of the stamps but is mentioned above in connection with *Dendrobium teretifolium*. Robert Brown spent the years 1801-04 in Australia and circumnavigated it with Captain Flinders. He carried out the first great systematic work on our plants. In his lifetime he became regarded as the world's greatest botanist.

Short History of Orchid Propagation

PROFESSOR JOSEPH ARDITTI

Until the 17th Century it was not known whether orchids produced seeds. In fact one assumption was that they did not and reproduced by rather exotic means. For example, one theory was that *Satyrium* arose from goat sperm spilled on the ground during copulation. While the European botanists formulated such theories a Dutch merchant on the Indonesian island of Ambon noted a fine "flour" in the fruits of orchid and suggested that it may be seeds.

By the year 1800, European botanists were aware that orchids produced seeds, but it was not known whether they could germinate. Or, at any rate published reports did not exist until 1804. In that year the British botanist Richard Salisbury published an illustrated report on the germination of European terrestrial orchids.

Salisbury's report was descriptive and did not deal with the germination requirements. They were still a mystery and orchid growers could not germinate seeds. In 1853 a surgeon from Exeter, Dr. John Harris, noted that seeds scattered at the base of the mother plant germinated. He told John Dominy, orchid grower for the Veitch Nursery, of his discovery. Dominy crossed *Calanthe furcata* with *C. masuca* and obtained seeds in 1854. He germinated these seeds by the Harris method and in 1856 produced the first man made orchid hybrid *Calanthe* cv Dominy.

The French claim the honor for the discovery of how to germinate orchid seeds for Joseph Neumann (1800-1858), one of their botanists. One wonders, if this claim is based on scientific and historical facts or overblown national pride. Regardless of whether Neumann preceded Harris, a Frenchman, Noel Bernard discovered that orchid seeds require fungal infection (mycorrhiza) for germination. His initial discovery and subsequent work are among the major contributions to orchidology. Growers quickly adapted his findings and used them for large scale seed germination. In England John Ramsbottom developed commercial applications for Charlesworth and Company.

Bernard died at an early age in 1910 but basic research on orchid mycorrhiza continued in the laboratory of Professor Hans Burgeff at the University of Wurzburg, Germany. However, neither Bernard nor Burgeff germinated orchid seeds without fungal infection (i.e., asymbiotically). They came close perhaps, but the discovery of asymbiotic orchid seed germination was made at Cornell University in the U.S. by Professor Lewis Knudson. He published his results in 1921 (in Spanish) and 1922 (in English) thereby making extensive orchid hybridisation and propagation possible. And, he started a controversy. Ramsbottom was not overly impressed and suggested that an orchid without its fungus was like Hamlet without the Prince of Denmark. Burgeff quibbled about details and was generally antagonistic. Bernard was dead, but his mentor, J. Costantin, took up the cudgels.

Costantin took the matter not only personally, but also considered Knudson's discovery to be an affront to French science and pride. He leveled several unprofessional accusations at Knudson and the battle became acrimonious. Costantin wrote grandly of the teachings of nature and great discoveries of French science. Knudson replied by supplying experimental evidence which eventually proved him right.

Tissue Culture

The first attempt to propagate orchids through tissue culture methods was by Dr. Gavino Rotor at Cornell University in 1949. However, the advance which laid the basis for rapid mass clonal propagation possible was made in the U.S. in 1946 by Dr. Ernest A. Ball who developed a method for the culture of *Tropaeolum* and *Lupinus* shoot tips. These methods were later adapted by Dr. G. Morel in France for the culture of *Cymbidium* shoot tips. Dr. Morel's work, in turn, provided the impetus for the development of other methods for additional species.

Literature

Arditti, J. 1967. Factors affecting the germination of orchid seeds. Bot. Rev. 33: 1-97.

Arditti, J. 1972. Professor Lewis Knudson and the asymbiotic germination of orchid seeds. The fiftieth anniversary. Amer. Orchid Soc. Bull. 41: 899-904.

Arditti, J. 1977. Clonal propagation of orchids by means of tissue culture — a manual, p. 203-293. *In* J. Arditti (ed) Orchid biology, reviews and perspectives. I. Cornell University Press, Ithaca, New York.

Morel, G. M. 1974. Clonal multiplication of orchids, p. 169-222. *In* C. L. Withner (ed) The orchids, scientific studies. Wiley-Interscience.

Reinikka, M. A. 1972. A history of the orchid. Univ. of Miami Press, Coral Gables, Fla.

Shechter, Y. and J. Arditti: 1972. The discovery of asymbiotic orchid seed germination. Orchid Rev. 80:147, 1952.

de Wit, H.C.D. 1977. Orchids in Rumphius' *Herbarium Ambionense*, p. 47-94. *In* J. Arditti (ed) Orchid biology, reviews and perspectives. I. Cornell University Press, Ithaca, N.Y.

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Search for the May River 'Red'

MARJ PURNELL

Do your fantasies take you adventuring for orchids along the mighty Sepik River? Then join Marj Purnell, Rosemary Bromwich, *et al*, as they brush away the mossies, ticks, spiders, lice, bugs, leeches and mud. Yes, they did collect the fabulous 'Red'.

For many years I have longed to get my hands on this beautiful form of *Dendrobium lasianthera*, a photo of which Andree Millar printed in her book *Orchids of Papua New Guinea — An Introduction*, and which only further whetted my appetite.

The opportunity at last came, and in March this year, a party of seven orchid maniacs rode up the mighty Sepik on the seat of their dirty jeans to collect clones in the May River area; the first "outsiders" to do so.

Andree led the party and we flew to Wewak from Port Moresby by F28, transferred to a chartered Islander for the hour's flight to Ambunti, where we began to up-river trip in a flat-bottomed "river-truck" to our first stop, Yessan, about ninety minutes away.

The Sepik River was at "Big Tide", flooded from the wet season.

Drizzly rain and showery weather all the way, with brief periods of sunlight, didn't give us much chance to take good photos, but I hope mine prove to be an adequate record.

Much of the time we were so busy, that I forgot to use the camera when we came ashore.

Five women, two men, a guide, the driver and his young brother (as offsider and chief bailer; the poor youngster spent hours bailing water overside with a plastic ice cream container), made up the party.

Andree, now living in New South Wales, Min Korsman and Dick Searle of Brisbane, Rosemary Bromwich from Darwin, Ann Mayles from Indiana, USA and Col Ruthenberg and myself from Mackay, made up the party.

None of us in the first flush of youth, but each consumed with desire, "To bring back the 'RED' — come hell or high water". We got both; plus sore bottoms, jolted spines, millions of mosquito bites, prickly heat, rat-bites, blisters, tummy upsets, colds, tropical ulcers and sheer exhaustion in only nine days.

At Yessan we stayed at the Community House, with cement floor and rain water tank, after a steep climb of about one hundred feet up greasy steps cut into the clay banks; pure mud on landing.

Ablutions tent was a blue plastic-coated cloth over a metal frame, which proved pretty awkward to we "oldies" with stiff joints, till we learned how to work the canvas shower hooked onto the top; or if water was short, we settled for a tin dish of water and washed as much as we could. Everywhere we went, a crowd of youngsters would appear, watching and talking, with much giggling at the antics of the "white fellas". They often got under foot, but were so pleased to see visitors and were so good at collecting orchids that we couldn't discourage them.

The toilet tent was all of a metre square, zipped up inside and out and clammily hot, and we had to take an insect spray and demolish the mosquitoes and bugs trapped inside each time.

I had the dubious distinction of being first in. Unfortunately it was set on a slope, a small hole dug in the clay soil and a dinky little toilet seat tied to the rather frail metal frame with, incredibly, "quick ties".

Naturally it collapsed, leaving me floundering like a cow caught in a barbed wire fence in a sea of wet clay and rude remarks.

We set up camp, and first thing always was to get the billy on for a cuppa; we used to have to restrict our fluid intake in the morning as we simply couldn't go ashore. The land was underwater, feet deep for umpteen yards of scrub, or pit-pit thickets into the water.

The locals came in with some good specimens of *Dendrobium mirbellianum*, *D. lineale* and *D. macrophyllum*, many bulbophyllums and little botanicals, plus some really superb clumps of *D. smilliae*, the lovely white and dark green form, some of which we bought and left for our return.

We slept on "blow-ups" on the floor, covered by mosquito nets, and the air was still and close and saturated with the smoke of mosquito coils and insect repellant — the makers of which made a profit that trip, I'm sure.

Morning came at last. We didn't know then that this was to be our most comfortable camp. We packed and set out, but all the camping gear which had been set up the day before, had to come too, and this proved too heavy and the boat couldn't plane.

Back we went to hire a native canoe, a long, slim dug-out, which was strapped alongside like an outrigger and loaded with camp gear.

Still useless, so Steve, our young Australian guide, had to go back to Ambunti to hire a big river canoe with outboard motor.

He later confided he'd been dismayed to learn

we were a party of "geriatrics" and he feared the worst. He lived to eat his words, as we gradually had to take over his camp chores after a hard day, but I'm sure he was glad to see the rear end of us disappearing at Karawari Lodge when we got back there, as we proved tougher, more determined, and more fluent in Pidgin than he expected.

We finally got away, the big canoe loaded with gear, and we rode in the river-truck's hard fibreglass seats that we soon learned to pad in an effort to soften the ride, knees flexed as there wasn't room to extend our legs.

Three hours later we arrived at Kupkain Mission; the priest was away, so we hired his house and had a clean up under his patent shower.

A hose extended downhill from the water tank into his bath-house; but the palm-slatted floor was a bit dicey. The slats were so far apart, it was a little hard to keep from falling through, and the mosquitoes appreciated the feast on bare flesh.

That night there was an almighty storm and we were glad to have a roof over our heads.

Ann, the American, had her pillow deflate in the night and woke with a crinked neck and her head on the floor.

We packed up, and skidded down the slippery ridge and off to Pamu calling at Iniok on the Freida River where there was a Shell fuel depot for a mining camp up in the hills.

All the drums were standing on end in the mud, with flood water lapping half way up their sides, the grass, and shrubs under water, with the tops of crotons and dracaenas half submerged, poking up above dirty grey water.

Sepik mud has a peculiar oozy clinging quality, grey-black and smells horribly of dead and rotting vegetation; an all-pervading smell that clung to us all the time.

On towards Tauri Village, where we were flagged down by mistake by the people who thought we were the Kiap's (District Officer) boat. The Tauris had clashed with the Mowi Villagers further downstream, over land and sago palms, and had "killed" a Mowi man and were in fear of harsh retaliations.

Armed to the teeth with spears, knives, tomahawks, bows and arrows, bones through their pierced noses, faces painted black and the women and children out of sight, they meant business.

After "talk-talk", we found the man hadn't been "killed finish", but "killed tasol" which meant he'd been knocked unconscious, and would no doubt have a sore head and thirsting for a pay-back fight, so we decided it was none of our business and took off up-river again.

Thousands of soft-bodied, creamy, dragonfly-like insects with double trailing tail fins were aquaplaning on the glassy surface of the water. Clouds of these insects, with flocks of wheeling, small, blue-black birds feeding on them, swooping and turning in unison. Apparently the insect flights last only one day; on our return we saw none.

The water runs deep and fast with eddies and whirlpools; midstream it was about fifteen fathoms deep and had overflowed the banks with village houses on stilts, often leaning at drunken angles. The house walls are of very cleverly-woven pit-pit, a wild hollow cane which is flattened, split and woven into intricate patterns. It grows in great thickets for miles along and back from the river, into the swamps which stretch over most of the land to the mountains. The thatched and very waterproof roofs of the village houses are made from sak-sak, sago palm leaves; a must in the wet and steamy swamp lands but a marvellous refuge for rats.

The sago palm grows in great thorny thickets with murderous spikes and provides the staple diet of the people. It looks pretty ghastly stuff at best. After the palm has flowered the trunk is cut, split lengthwise and the pulp hacked out. Then it has to be soaked repeatedly to obtain the sago pulp, washed to produce the final gluey product which is made into a kind of mush or baked in flat sheets.

All along the river, people were hard at work sluicing it; it takes all day to prepare enough for the evening meal.

Unhappily we saw much evidence of lack of medical care. Frightful cases of "grili", a fungus disease resulting in a dry, itchy, scaly, whorled skin, which is contagious, and which often covered the entire body. Tropical ulcers, sores and eye infections were very obvious, and children with their hair hacked off to the skull due to head lice infestations.

We saw only one crocodile in the river, but quite a lot of villages had "farms" of baby crocs, in enclosures.

All along the river bank huge panicles of the Flame of the Forest vines, *Macuna bennettii* draped over big trees and hung down their lovely scarlet flowers; a magnificent sight.

We also saw many different alpinias with delicate orange, pink or white flowers like coral.

We pressed on and arrived at the old May River Agricultural Station in the late afternoon, stiff and tail sore and very glad to see some grass and reasonably dry land at last.

Dinner as usual, dehydrated meat (heaven knows what animal it was), and veges and gluey rice, followed by a pawpaw we bought. I shall never eat dried food again, unless in dire need.

The cargo canoe finally arrived very late; we strongly suspected the local who drove it had stopped to trade with our supplies, though we couldn't pin him to admit it, but we found

ourselves short on such stores as sugar. That night we slept on the floor of the abandoned old house belonging to the agricultural officer, and the rats came out after dark. I woke to a nip on my arm, flung my hand up and the rat landed on my face.

Later, one investigated my hair and they ran all over us, bold as brass despite leaving the hurricane lamp alight all night. We managed to kill a couple, but they rustled and squeaked all night.

Next morning after breakfast on muesli and pawpaw, all hands and the cook took off in the river boat and hired local dug-out canoes to pole up the barats or side-channels to collect lasiantheras, which grow on low, rather thin trees often standing in water.

I stayed in camp with Andree to deal with the locals who began to stream in with bundles of orchids, and the coveted May River 'Red' was finally a reality.

They were utterly beautiful and beyond my wildest dreams. Glorious colours in red browns, flushed with purple, orange-reds, red-purples, red-browns with yellow margins and all the colour combinations of red, orange, purple and brown in between.

Some especially beautiful rich dark purples with darker horns, and many purples of various shadings too, plus *D. conanthum*, old gold, with flared lip.

I think conanthum has possibly cross-pollinated back and forth for ages to infuse the lovely sunset colours into some of the lasiantheras.

We found at least twenty colour variations and many more colour combinations. I felt like a kid in a sweet shop not knowing where to start feasting.

It was most difficult to deal with the people — they all wanted to sell, we wanted to buy, but many of the plants were too big (we had to cut the canes back — pure sacrilege), and Andree became hoarse explaining to indignant tribesmen not to bring in monsters and not to waste time and energy on ant-plants, tree ferns, tassel ferns, elk horns and botanicals.

All day we kept at it, the others returned with their loot; we used up all our silver Kinas and K2 notes, and then came the big job of cleaning, sorting, trimming and bundling up the plants for travelling next morning; blisters on blisters.

We fell into bed, after a dinner of *Talapia*, an introduced fresh water fish from Africa, imported to eat mosquito lavae and which thrives so well in the Sepik it has started to decimate the native species.

It is somewhat like a thick bream with big eyes, black-grey and tastes like mud — but it was a change from the usual hard-tack.

We were all pretty bone weary, stiff, sore, dirty, itchy and rather mouldy-smelling and it is hard to sleep practically shoulder to shoulder in a cloud of mosquito coil smoke and insect repellant.

Bitter accusation about "people who snore" or "walk about all night" caused some friction, but lack of sleep, sheer weariness, lousy food and a long, long day on our tail-bones weren't very conducive towards producing sweet tempers. Heaven knows who planned such ridiculous mileages each day; they were pure marathons and endurance tests. One day we did nine and a half hours non-stop, another seven and a half hours, till four or five hours became an "easy day".

At the May River Station there was a pet hornbill with ridiculously long, black eye-lashes, that allowed us to hold him to have our picture taken; and rather sadly, twelve beautiful Birds of Paradise which had been gutted and mounted on wood to dry in the sun.

Luckily the female is drab and not killed for her plumes, which is just as well, as the locals now use shot-guns instead of bows and arrows. So much for modern times . . .

Actually, we were supposed to stay at Pamu Village but it was flooded, so the agricultural station was very handy.

Our plants were stowed upright in the cargo canoe and we were off, downstream to the April River area, but had to detour to Yauenian to get supplies and small change (we hoped); so finally got to the Summer Institute of Linguistics trade store perched high on a knoll above the water.

We were astonished to find a plastic bucket we can buy "on special" at three for $2.00, was seven Kinas and 50 toeas — about $8.50 each.

It was Andree's birthday, March 19, and we managed to get a Big Sister banana roll in a tin for about $1.80, no doubt on "special" too, as it was rather ancient, plus some hard little sweets at ten cents each.

Off again along the Wogamush to try to reach Oum, but we were told by the people of Bitari Village that we had little hope of getting there by dark, and that the river had fallen and there were many snags, submerged logs and rocks.

We tried, but gave up, and returned to Bitari for the night where he hired a local house on stilts to sleep in and cook under, out of the rain.

By this time my vertebrae had about had enough, and I simply couldn't get up the "stairs" — a wet round log propped up against a little front platform which was half rotten. The log had notches cut about 75 cm apart and had a nasty tendency to roll, so four of us chickened out and settled for tents outside.

Andree had her party; Ann produced some

balloons, I produced the banana roll and sweets (there was a small amount of claret left to wash it down), and we all sang "Happy Birthday", with rather feeble cheers. The locals thought we were all quite mad, giggled and hovered around and pinched the balloons in the night.

Ann had a horror of spiders, so she, Min Korsman and I squeezed into one tent, and Dick Searle slept in lonely splendour in the other.

A pet cassowary investigated him in the dawn hours when I staggered outside to survey the water-logged and muddy world. The river was a blanket of white fog which slowly dissipated as the pale sunlight finally filtered in.

The people were very unsophisticated, clinging to their old customs of grass skirts and pierced and stretched ear lobes bound round with thin strips of cane. They had two holes pierced in the tops of their noses, with thorns, curving back like little black horns, inserted in the punctures.

The older men sported holes through their nasal septums too, with bones and other decorations thrust through.

Strangely, many river people don't bath much. They pole about or paddle their dugouts with extraordinary skill; even little children of four or five years are experts. Standing with one foot on the bottom, and the big toe of the other foot gripping the edge of the canoe, a paddle, and the Sepik is theirs.

They get fearfully muddy but just let it dry and drop off; no doubt it helps stave off the screaming hordes of mosquitoes that must make their lives utter misery.

We went collecting in the morning, but found mostly erias, bulbophyllums, calatheas and acriopsis, then left at midday, and promptly bent a propeller blade on a submerged log.

Soni, our driver, who was born on the Sepik and fortunately for us, knows it like the back of his hand, waded ashore to straighten it out and we were off again. Soni often took us through side channels and waterways.

We'd go through narrow openings in the pit-pit, disturbing brown ducks (Dick Searle could have choked me when I said "Look! Roast dinner! Duck and orange sauce!" — We were pretty fed up with hard tack by then), herons, fish eagles, great egrets and black cormorants all sitting on logs in the water, to rise slowly and gracefully fly off into the trees.

Little water hens would scuttle into the pit-pit and the infamous Nile cabbage, *Salvinia molesta*, lived up to its name, constantly fouling the propeller.

We finally got back to Yessan in late afternoon. Never had such a muddy landing look so good with the prospect of a warm rain water shower ahead.

The people had collected some *D. mirbellianum*, a lovely clear yellow, striped with purple-brown, more lineales and what appeared to be natural hybrids of both, which were bought, plus some bananas, pit-pit, corn and pawpaws. The corn proved a bit hard, but the pit-pit a luxury. It is the unflowered head of a wild cane which is sheathed like a long slim ear of corn; roasted in the ashes it is rather like a combination of corn and asparagus and is delicious.

Early next morning there was a low rumble and the earth shook with a rather decent-sized "guria" (earth tremor), a first for some of our party.

Off again down-river to Ambunti to refuel for the run into the Chambri Lakes, but being Sunday it took us three and a half hours to organise and complete.

Here women and children were catching small fish with net scoops and baskets; hundreds of them close to the bank, on which hordes of small boys rolled in the mud and leapt back into the water.

We by-passed the flooded Chambri Lakes and stopped at Mindibit where we were supposed to transfer to a house boat to sleep, but found it had upped anchor and gone off for repairs.

No one knew we were arriving anywhere along the whole trip except at Karawari next day; so it is just as well we couldn't make the flooded-out Chambri Lakes.

The Mindibit Lodge, a local enterprise, was awash; flood water half-way up the front steps where we moored the boat and stepped ashore onto the steps.

"Heaven!" I said, surveying our rooms. "Look! Indoor toilet, clean sheets, even a shower. Civilisation at last!" I happened to brush the curtains in my enthusiasm; a rat fell out, ran along the window and out through a big hole in the gauze. Andree laughed herself sick.

Next morning we left for Karawari via the front steps again — the whole garden was under water with crotons half submerged and some very pathetic chooks perched up in wattle tree out of the wet. We were told they'd been marooned for a fortnight.

Karawari for lunch, past the airstrip on which a small Cessna was askew beside the waterlogged runway; the result of an accident the previous week. Such bliss! A cold fruit drink, iced towels and a marvellous salad with fresh wholemeal, rolls and butter, upon which we fell like starving refugees.

Later we went to Ymas Village farm to see the lasianthera garden Andree had spent so much

time and effort to get established, only to find it practically a ruin, with the bush and Kunia grass taking over and many plants dead and dying.

So we left for Minjimbe farm, and found it underwater too, but the people had scattered the lasiantheras round onto village trees, standing in three feet of water, so we returned to Karawari Lodge.

A hot shower and shampoo, our last clean clothes that we'd saved for just this, and a gorgeous baked dinner. Sadly, our stomachs must have shrunk, and none of us could eat it all. After a steady diet of muesli, dry biscuits and Spam, dehydrated stew and rice we all found it too rich, and I had nightmares all night.

The sheer bliss of being clean again is indescribable, and we were all so grateful to begin to feel human and smell reasonably fresh again.

Next day, collecting on the Ymas Lakes brought in some very nice "Sepik Blue" forms of lasianthera and that night we were entertained by a sing-sing, put on by locals wearing ceremonial dress; head-dresses of hornbill beaks, feathers, paint and croton leaves and playing their special Sepik bamboo flutes. Haunting music, with the legend behind the dance explained by the head waiter whose small son took the part of the adolescent who was to be "initiated" in the Haus Tam Baran (spirit house).

Loaded to the gills, we took off by Islander aircraft from the small, new airstrip and flew to Mt Hagen over tea and coffee plantations, sweet potato plots, vegetable gardens and stands of mountain casuarinas which are very prevalent in the beautiful highlands.

A F28 to Port Moresby where I met my old friend Ombas Omucan, a Finschaefen man who is head orchid man at the botanic garden and who was companion to Andree and I on many orchid trips in New Guinea over many years.

Here we had our plants treated, complied with all the rules and regulations, got our papers and permits-to-export completed and dispatched our plants home for fumigation and quarantine. We also trotted Ann off to the doctor to have the nasty infection on her legs, which was turning into ulcers, treated properly.

So now I have some *D. lasianthera* May River 'Red' at long last. Mine are still sitting up in pots in quarantine, and I most sincerely hope they survive.

Was it all worthwhile? Orchidwise, a definite yes; but it is too soon to forget the ridiculous mileages we were forced to travel each day through bad planning, the ghastly discomfort, poor food and worse accommodation. A more mature and experienced guide for starters is essential; a lot more forethought and planning should have gone into organising the trip, and could have made the going so much easier with no extra cost.

But, had I not got the plants I wanted, no doubt I should be quite prepared to try again, but only after careful forethought. But, it would have to be pretty soon; age and protesting joints could never survive another attempt.

6 Holmes Drive, Beaconsfield
North Mackay, Queensland

Silver Anniversary at Mackay

YVONNE MATTHEWS

Over 100 orchid lovers came to Mackay to celebrate the Silver Jubilee for the Orchid Society over the Labor Day Weekend, 1982. Guests arrived from Brisbane in the south, to Innisfail in the north.

The packed programme included a showing of Hawaiian slides presented by Mr J. Feige, and also slides of orchid show winners in the Brisbane metropolitan area.

A one-day orchid show attracted attention from all registrants and from the public who viewed the show on the Saturday afternoon. Local business houses donated silver trophies for the occasion and made twenty people the envy of the weekend.

The bush-housing was well attended and included twelve local growers' houses, two of which were out of town, and all registrants were taken by bus to view these.

Dr Andree Millar, our guest speaker, gave an entertaining, informed and inspiring talk which provided constructive criticism on our way of life and offered us alternatives to help conserve and grow the orchids indigenous to our country.

The auctioneer, Mr D. Rasmussen, was very busy for an hour putting 150 plants under his hammer. Many new owners are happy with their purchases and a few wish they had been the successful bidder. The successful dinner dance to finish the night also ended the formal proceedings for the weekend.

As usual, to make a programme run smoothly all sections co-operated and ran to time. We congratulated the hostess, chef and staff at the Oriental Reception Lounge for keeping up their high standard of excellence. All who attended the weekend were thankful that the next orchid function is 14 months away, so they can work on a programme to reduce weight to do justice to the excellently-prepared menu.

The society wishes to thank all donors, registrants and those who offered congratulations and best wishes to it and to its members. Now we can look forward with enthusiasm to the Golden Jubilee. *PO Box 776, Mackay, Queensland 4740*

Selective Breeding of *Dendrobium discolor*

K. A. MacPHERSON

Mr Ken MacPherson is famous for his hybridising of dendrobiums. Such crosses as *Dendrobium* Gloucester Sands (*canaliculatum* x *discolor*), D. Gloucester Gem (Gloucester Sands x *bigibbum*) and D. Gloucester Charm (*veratifolium* x *canaliculatum*) are very well known. There are many others, all with Gloucester in the name, and some of his seedlings have been registered by other growers.

Ken's experience in hybridising extends over a period around forty years. In this article he explains much that took long years to find out, and which would be very helpful to all breeders and seedling buyers.

The magnificent forms of *Dendrobium discolor* described here and pictured near the centre of this journal will be at their flowering best at the times of the Seventh and Eighth Australian Orchid Conferences. The Seventh in Brisbane this September, and the Eighth next August at Townsville.

In this account of my creative work on *Dendrobium discolor* I must range over a number of facts necessary for anyone to know who desires to enhance its cultivation.

A lifetime association with it, in its native habitat, and a span of time in the production of three generations of seedlings over a period of 25 years have enabled me to reach serious conclusions regarding its puzzling behaviour genetically. A knowledge of these could be relied upon to assist others to obtain favourable results in the future. These conclusions are based on results gained from around fifty crosses using about thirty selected "wild" parent plants.

The habitat of this orchid, which has adapted itself to exposure, very wet areas, and also very dry conditions, extends from the Great Dividing Range to the far-out islands on the Queensland coast; and from just south of Rockhampton north to the coast of Papua New Guinea, at an elevation of up to 300 metres.

It lives either in large colonies of plants derived from a single clone, or, in some localities, many different variations can be found. Careful scrutiny over large areas at flowering time reveals some very desirable plants.

The species was originally named *D. undulatum* by Robert Brown from living specimens during his voyage up the Queensland coast with Captain Flinders. In 1963 A. D. Hawkes found that the name was a homonyn (one used for another dendrobium prior to Brown's publication), and under the rules of nomenclature the next naming, that given it by Lindley in 1841, had to be used. Lindley must have had a form markedly different from Brown's to have considered it to be a new species. It was probably the brown form with a white or pale violet lip, hence Lindley's name *discolor*, meaning two colours.

There are a number of magnificent forms of varying colours which are far from drab, ranging from the bronze, heavy textured flowers with strong violet labellums to the yellow-green forms classified as *D. discolor* var. *discolor* fma. *broomfieldii*. The beautiful clear colour of this latter form attracts so many growers to acquire the plants.

In my experience there have now been found upwards of twenty different variations of forma *broomfieldii*.

The flowering time of all these orchids range from when first spikes appear in mid-June at sea level to August, thereon till December away from the coast or inland. Early in my experiences I attempted to cross plants to lengthen the flowering season. After a length of time this proved a failure, as seed parents from the sea level or early flowered forms when taken further inland produced plants with complete bud-drop from the winter cold; and by the same token, plants from inland flowered early in the spring when cultivated at sea level. The work was abandoned.

For the purpose of selective breeding I will try and put the message over in the simplest terms possible regarding the genetic make-up of the orchid. As is well known all living things — plants or animals, at a creative time, begin as a single cell built around a known number of chromosomes, or material characters, on which there is an army of genes which control the output of life from the chromosomes. Once the first complete life cell begins to develop it multiplies to a complete being.

It appears from the behaviour of *D. discolor* var. *discolor* (which is generally a less-spectacular form), that it is extremely fertile in seed germination to cope with the difficult situations of the habitat it has to conquer, yet it is not so flamboyant in flower style. It is blessed with a very active army of genes, ever on the change, to ensure progressive survival. Hence these cross-pollinated progeny are very variable. It also has the vegetative ability to change flower spike points to aerial growths should the basal parts of the plant be damaged.

In a seed-propagated colony we can see the natural production, due to this genetic ability to

produce wide variations, of a large number of fine forms. Many others will have failed to adapt and been destroyed, as Darwin has shown. Some fine forms have survived, having a sheltered place from the encroachments of man and settlement, until, in some cases, destruction of the immediate habitat. From now on I will refer to these as the "Magnificient Forms". Of such fine plants about fifty variations have come under my notice for examination in cultivation, including forma *broomfieldii*, and there would be more somewhere in the habitat.

I am sure now that some plants, having become established in some locality, do not reproduce themselves from seed. It is significant that only those plants which have inherited the ability to produce large numbers of aerials have established themselves in large colonies in naturally-protected places.

Those plants originating from a seed parent of the type form that has the propensity to produce fertile seed in large quantities have genes excited to substantially change some feature of the seedlings such as robust growth, stature, heavy flower texture, and other desirable features.

The Whitsunday, Proserpine and adjacent areas seem to offer the peak of special variant development in the whole of the habitat. This is aided by favourable warm climate, salt air, bright light and possibly radiation.

There is a type of *D. discolor* var. *discolor* forma *broomfieldii* which I have designated as 'Robusta'. A large colony of this plant was the one and only clone on one of the Whitsunday Island group, and was well known to the boating fraternity. Just after World War II a party raided this colony. Some hundreds were taken and shipped all over the tropical world, the price being £5 each. When this was cultivated it became shy to bloom, but each season gave one or two aerials to every stem and thus it became easy to acquire plants from anyone having it.

In 1954 I acquired four or five aerials which, with good potting, grew rapidly. I selfed seed pots on same, and used the pollen on other forms of note. About six years was to elapse.

During that time quite a number of *broomfieldii* variations, several in colonies, others mostly single plants, came to light over the habitat mentioned. One was in Bowen, several in Mackay, and others as far south as Clairview on the coast. I had it in mind to produce this orchid in a big way and never missed a chance to obtain flowers for pollen from people who owned them.

By 1950 my seedlings of forma *broomfieldii* 'Robusta' x self (cross 155) came into flower. Results gave me a false sense of success. Out of thirty seedlings flowered two-thirds were fine yellows and were sold out. The remainder tended to be more green than the parent and these I distinguished with the name 'Green Gloucester'.

The future looked good. I set out to flask in a big way. A year later another cross between *broomfieldii* 'Robusta' and *broomfieldii* 'Golden', the latter a form from Hamilton Island, came to flower. All plants had brown flowers similar to the type form and were discarded. Then another cross between two very fine forms of the local *broomfieldii* flowered — all were brown. I had offered flasks for sale but I quickly discarded the lot as waste of time, money and good potting material.

By this time I had branched out on another thought: I tried crossing 'Robusta' with some of the 'Magnificient' bronze forms I had under study. These were all sterile, so no progress.

I then tried 'Robusta' with some different species, making diploid crosses with *D. nindii, D. veratrifolium* and *D. mirbellianum*. Fine, healthy seedlings came along. (Note: Kirchs' of Hawaii declared that whenever they used *broomfieldii* fine, healthy plants resulted. Their stock was part of the original 1954 shipment of *broomfieldii* 'Robusta' — all that was available at that time).

By 1966 'Robusta' x *D. mirbellianum* readily flowered, a green-brown undulate. Nobody was interested, it was a diploid cross. I then crossed back to a selected clone of my cultivar 'Green Gloucester'. Resulting flowering was a fine, light green undulate of dwarf character, very desirable. Further crosses are in the process of development at this time — the future to decide.

It is now quite clear, that to make any progress in the development of this orchid, one will need to continue line breeding, or find other clones which will reproduce themselves by selfing and cross their progeny with the *broomfieldii* 'Robusta' line.

THE 'MAGNIFICIENT' FORMS

I will now return to the 'Magnificient' forms. As mentioned earlier there would appear to be quite a number of these plants spread over the areas where large colonies of the type form occur. They are usually distinguished from other plants by character of being very robust in statue, having flowers with heavy texture, and having darker bronze colours. Over the years considerable effort was given to try and reproduce these forms, as with forma *broomfieldii*, and with some success. Apart from all this, they are beautiful plants to have in cultivation. After much effort at crossing them and failing to produce fertile seed selfing was attempted, and out of this some progress was made.

I will list five of the intensely-selected clones I cultivated and used for seeding. There are now

quite a few divisions of some of these clones which I have passed on to other growers.

Variant 'Magnificient'. A plant of heavy statue, very large spikes and heavy-textured flowers. A large colony still exists in its native state. All attempts at selfing failed. Aerials freely.

Variant 'Salmon Gold'. A fine, sturdy plant of average height, half undulate, of fawn to brown colour. Aerials freely. A large colony still exists in its native state. So far absolutely no success trying to seed it. It has the fine ability to grow around the rim of a small pot and not climb out. It would be the finest clone of all *D. discolor* to grow as a specimen.

Variant 'Beautiful'. Sturdy plant with large bronze flowers with violet labellum. A single plant exists only in my collection. Some progress has been made in reproduction, but the violet shading of the labellum had been lost in the progeny.

Variant 'Brunette'. A heavy-textured spike of red-bronze flowers. Reproduced itself by selfing. Genetically a remarkable plant. Many growers will know D. Salak 'Brunette' from a very successful crossing of this clone with *D. stratiotes* which provided a new line of magnificient dendrobes. It seldom gives an aerial. Three plants existed naturally of this clone. I have one, the others are now lost because of the clearing done for settlement. Refer to illustrations elsewhere.

Variant 'Blue Eyes'. A very large colony of this plant exists, so far, in its natural habitat. It survives extreme hardship in the way of heat exposure and dry conditions. It gives aerials in all directions. Flowers are a fawn colour with violet shading in the labellum, resembling a pale D. Peter Peterson. Selfing produced a very desirable golden undulate with some lavender in the labellum, and this progeny crosses freely in other directions. The future seems assured for this clone.

In conclusion, I record these experiences about *Dendrobium discolor* so the knowledge will be available to anyone who, in the future, desires to take up the challenge.

Proserpine, Queensland

NAMBOUR NAMES NEW NIGHT

The North Coast Orchid Society of Nambour, Queensland, announce that they now hold their meetings on the fourth Monday of each month in the Band Hall, Daniel St, Nambour. Nambour is a very pleasant two hour car trip from Brisbane. Mrs P. Mann is Society President. Mrs L. Paroz the honorary secretary may be contacted on 081 45 9348. If you are motoring to Queensland for the Seventh Conference, Nambour and its environs are well worth visiting.

GRAFTON'S SHOW THEME

Grafton OS has hit on a really good theme for this year's spring, namely "Orchids and You". Individual displays have the sub-themes: Orchids Your Heritage; Orchids Your Hobby; Orchids Your Pleasure and Orchids Your Adornment. Should be worth dropping in at St Mark's Parish Hall on September 24 or 25.

CHANGES AT OS OF NW TASMANIA

Mr M. Nutting steps down after a sterling term as president, his successor being Mrs Nutting who has been secretary for some years. The new secretary is Mrs E. O'Hattoran, PO Box 332, Burnie 7320. Phone 42 3730.

The society meets second Monday of month at Hellyer College, Burnie.

MORNINGTON PENINSULA WINTER SHOW

Champion and Reserve Champion Orchids were crosses as yet unnamed. The championship went to Mr and Mrs Podalski's *Paphiopedilum* Lyric, and Reserve to Mr and Mrs Metcher's *Wilsonara* Autumn 'Intrepid' x *Oncidium* Palmyre.

JUNE QUARTER DELAY

Our apologies for the late appearance of the June Quarter edition. This was due to a mishap with the original colour plates which made necessary their replacement. We appreciate the concern shown by so many readers.

TASMANIAN ORCHID SOCIETY MOVES

The Society now meets at Legacy House, 159 Macquarie Street, Hobart, just around the corner from the old meeting place.

Meetings are the last Monday of each month, at 7.45 pm.

A major advantage of the new venue is that it is on the ground floor, thus facilitating handling of plants.

For information on the Society contact Secretary, Mr J. F. Smith, 11 Warren Court, Howrah 7018.

GOSFORD WINTER SHOW

A seedling won Grand Champion for Mr Bill White. It was from a crossing of *Paphiopedilum* Winston Churchill and *P.* Pacific Ocean made by Mr Athol Bell.

Reserve Champion was Mr John Habjan's *Dendrobium* Lady Fay 'American Beauty'.

DR RIGG ON LABELS

During the giving of a very interesting guide to the benched plants at a meeting of the Ringwood Orchid Society Dr W. R. Rigg remarked on the advantages of noting the country of origin on all labels of species orchids. This can be a great aid to culture. A code such as C for coastal, M for mountain, or any other cultural information is used by a few species growers. To grow species well it is essential to know the conditions under which they grow in nature.

"The very first paphiopedilum species to be brought into cultivation was *P.venustum*, which was discovered by Dr Wallich in Sylhet, North-East India in 1813."

Peter Black in *Orchids.*

Exclusive Release

Palace Pearl 'Marie', EA/OSNSW

Awarded to Mr W. Godfrey on July 27, 1981



Pictured, the awarded clone which carried 61 12 cm flowers in an 8" pot.

This large white, late July-flowering clone, without heat, is a must for all discerning exporters.

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This important addition to the cut-flower world is offered for release on behalf of Mr W. Godfrey and Mr K. Black.

Condition of Release. Due to the importance of this clone a release will not be effected until a specific number of flasks have been ordered. It is envisaged that a projected delivery will occur between December 1982 and January 1983.

Orders will be dispatched strictly in the order of receipt. Price $75 per flask.

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17 Kerrie Crescent, Peakhurst, NSW, Australia 2210. Phone (02) 534 2929

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Ken MacPherson and his breeding



Mr Ken MacPherson of Proserpine, Queensland, has seen three generations of his *D. discolor* selfings and crosses flower. Results have never been predictable. He has found that whole colonies in the wild reproduce vegetatively and these plants rarely produce viable seed. There are, however, 'Magnificient' clones some of which respond to line breeding and crossing. Read his article Selective Breeding of *Dendrobium discolor*.

Above: Ken with the only-surviving clone of *D. discolor* 'Brunette'. Two plants of this clone were left in their bush habitat but were destroyed by land clearing. It has proved a fine stud plant and was crossed with *D. stratiotes* to produce *D. Salak* (the same cross was made and registered by another grower).



Right: A close-up of the spike of *D. discolor* 'Brunette'. The colour is striking and the heavy texture obvious.

of Dendrobium discolor superclones



Above: An undulate form of *D.* Salak. Note the relatively broad segments and the large number of flowers, all capable of lasting for months at their peak.

Below: A selfing of *D.* Salak 'Brunette' produced this heavy-textured red. Ken suggests that such line breeding is necessary to produce stud plants for hybridising.



Who will take up the challenge?

This is the question Ken MacPherson poses as he concludes his article. There are problems. Sterility and reversion to drab-type colours are shown by Ken to be usual. Like *D. kingianum, D. discolor* is a very variable orchid. Perhaps a detailed cytological study of *D. discolor* will reveal the same ploidy diversity as *D. kingianum.* Yet both these species hybridise freely in the wild. One obvious need is for the hybridiser to reduce the plant size and still retain inflorescences like those illustrated.

Spring is Blo

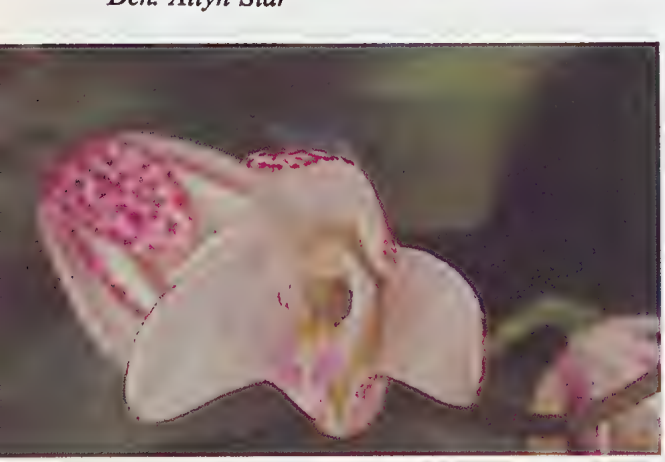
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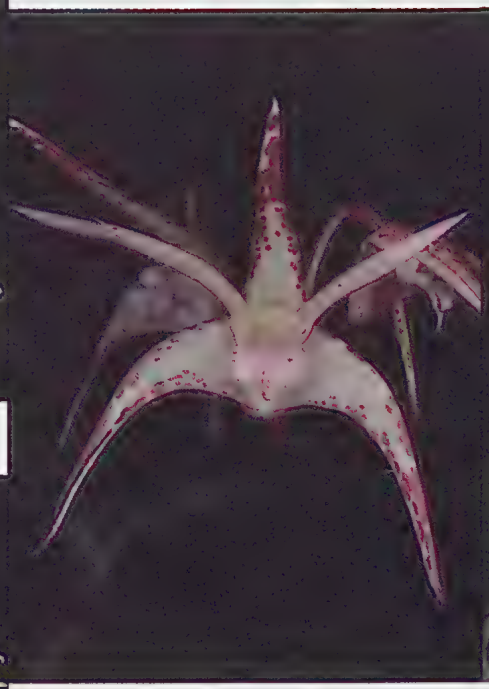
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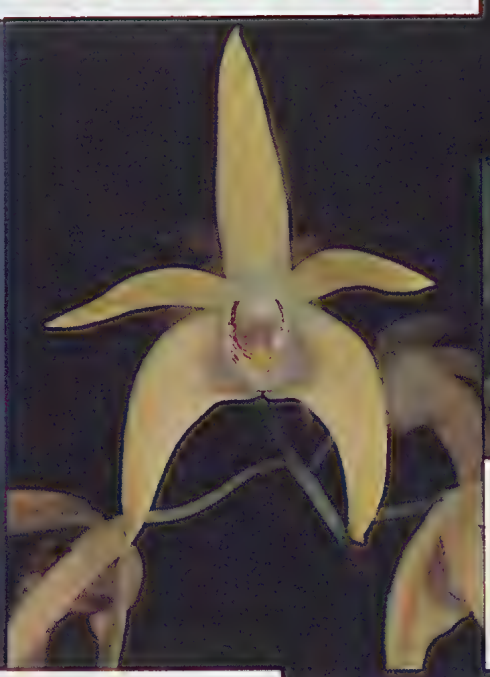
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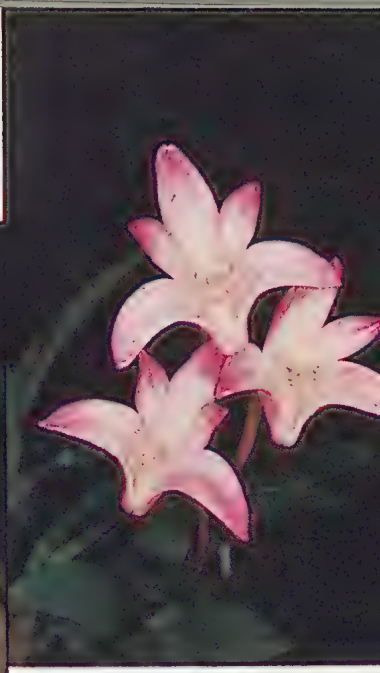
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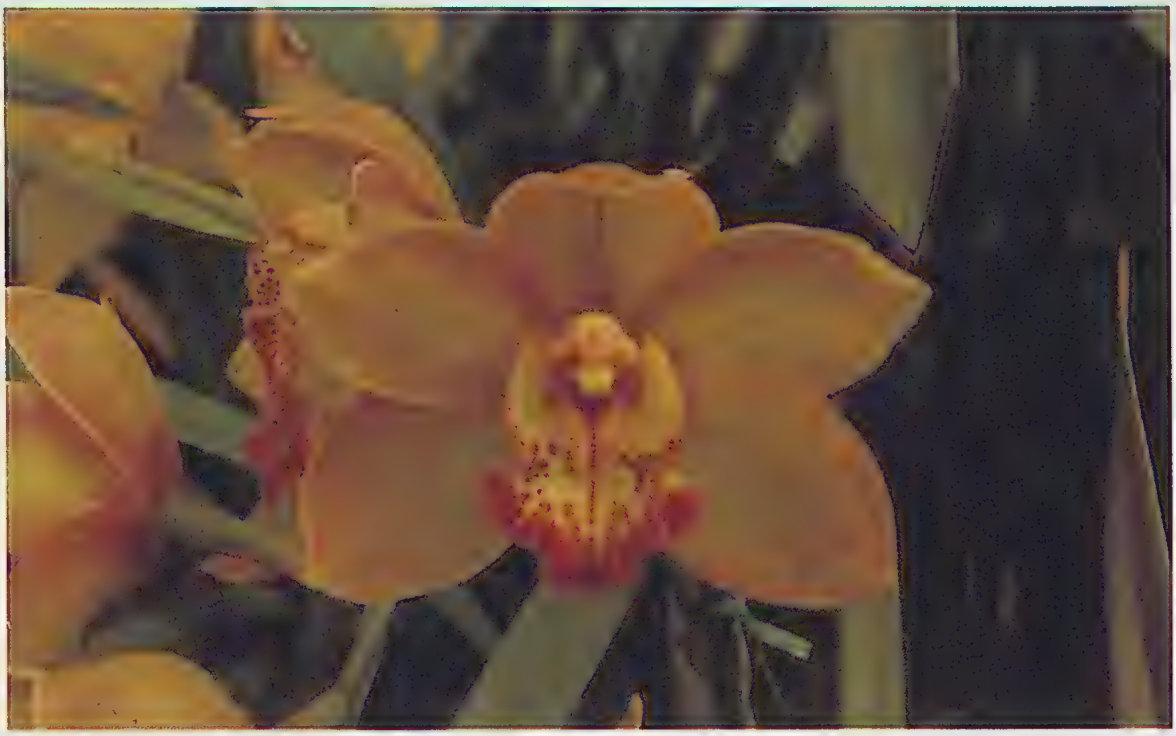
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Barushka 'Dorset Lass', AM/AOS



May River Frolic

Marj Purnell and Rosemary Bromwich record their experiences in this issue as they dared the mighty Sepik River with Andree Millar in search of the majestic 'May River Red', a beautiful form of *Dendrobium lasianthera*. The locals joined in to help and the illustration records the party's success.



Vanda Adam Bull
AM/QOS-AOC

Frank and Ivy Williams of Maryborough, Queensland grew this lovely vanda to perfection to gain a high Award of Merit. Only a crowding of the flowers stopped a FCC. It is from a crossing *V.* Beebe Sumner and *V.* Lenevat. Visitors to Queensland, either for the 1982 or 1983 Australian Orchid Conferences or at any other time, can be sure of seeing high-class vandaceous plants. In this issue Barry Paget tells how to grow them.

VANDACEOUS ORCHIDS

BARRY PAGET

Around eighteen different genera of orchids may be included within the Aerides tribe, a group of plants whose structure resembles that of a Vanda. It includes some of the most spectacular orchids known, and generally speaking, all members of the Aerides tribe are easily cultivated, once a few of their basic requirements are understood.

The word "Vanda" is a Sanscrit word referring to a native orchid of India, *Vanda tessellata*, and for many years the term was used to describe all plants having the same structure. Over the years taxonomists have studied these plants, and have placed them into the various generic groups which we accept today.

They are sub-tropical and tropical in distribution, ranging from the Himalayan Mountain areas; across South East Asia and through to Japan, south through the islands of the Philippines and Indonesia, New Guinea, and the sub-continent of Australia. They vary in elevation from sea level, where hot, humid conditions prevail to an elevation of 2000 metres. In either zone they appear in rather open areas.

The Aerides tribe is quite diverse in the range of shapes, sizes and colours of blooms produced upon the various plants. The ascocentrums produce small brightly coloured blooms on erect sprays, semi-pendulous sprays of blooms are carried by the aerides and rhynchostylis; large showy blooms are carried by the vandas; broad masses of starry red blooms enhance the renantheras, and phalaenopsis carry their symmetrical flocks of white or coloured "butterflies".

Vandaceous orchids are monopoidal, growing upwards (or downwards) from one foot or base. They do not have a rhizome, but instead have a single upright stem. The roots have a two-fold purpose, primarily anchoring the plant to its host, and also absorbing the dissolved minerals to carry them through the stem and into the leaves where, during photosynthesis, they are converted into food. In nature, plants of this tribe are found growing upon trees, fallen logs, on rocks and on cliff faces. These plants are true epiphytes or air plants, their roots spreading over the outside surface of the host, and never actually penetrate the inner layers of the host, or the soil.

Vandaceous orchids are most adaptable to cultivation and may be grown under similar conditions to cattleyas, dendrobiums, etc. In areas north of Brisbane they are easily cultivated under bush-house conditions, provided they are protected from strong winds, especially the westerlies which prevail during the winter months. Some added protection may be necessary if frosty conditions are prevalent overnight. In areas south of Brisbane hot-house conditions become necessary, according to the general temperature range. The plants prefer minimum temperatures between 10° to 15° C, although exposure to lower temperatures for short periods of time is not harmful.

Generally speaking these plants are light lovers, and most plants which are of a strap-leaf structure revel in around 50% shade. Those vandas of the terete or pencil type of leaf, require full sunlight to bloom satisfactorily.

In southern centres, plants could be suspended from the roof of the orchid house, where they will receive the greatest amount of sunlight.

Being monopoidal, these plants have no water storage organs such as the pseudo-bulbs of the cattleya alliance. As a result they require more regular applications of water, especially during the growing season. The amount of water required, and the regularity of applications, are governed by the potting medium used. The plants appreciate high humidity for the greater part of the year, though they will withstand dryness especially during the colder periods of the year. They do not have a definite resting period but their rate of vegetative growth slows considerably during the cooler months of the year. Air movement is a vital necessity.

Vandaceous orchids are heavy feeders, but I strongly recommend applying fertiliser at half the rate recommended upon the packet. I feel that many of the fertilisers available are suited to a large group of plants, but the orchid roots system is often damaged through the application of a stronge dosage. I recommend weekly applications of fertiliser for seedlings, fortnightly applications for mature plants. It is also a wise move to apply a variety of fertilisers over a two-monthly period, as no single fertiliser has a complete range of necessary ingredients. There is a very fine balance between light, water and fertiliser, and an increase in any one of these factors necessitates an increase in the other two factors. Similarly a decrease in any factor requires a decrease in the others.

For many years these plants have been grown in large pots in mixtures ranging from pure charcoal to the various fibres and bark. Nature

designed these plants to be "air plants" and by following her example, we are able to devise a satisfactory method of culture. Charcoal in itself is a natural filter, and over a period of time it absorbs the dissolved salts in the fertiliser applied to the plants, until after three years or so, it has built up to a toxic level, with consequent root damage. The various other media used "break down" over a similar period of time. It is also difficult to dry out the compost in a large pot quickly and plants sitting in a damp, cold mix are very susceptible to bacterial and/or fungal damage to the root system. Consequently, following three years of research I recommend the cultivation of these plants in empty wooden baskets or empty terracotta pots.

Consider the plants growing under natural conditions. They are receiving their requirements such as sunlight and ventilation, and the root system is permanently exposed to the atmosphere. The plants may be drenched during a tropical downpour and one or two hours later the surface of the root system has dried off. Growing the plants in empty containers allows the same process to occur. I have found that using this method, the plants establish much faster than they do under conventional potting methods. Placed in an empty container, they have no "comfortable" environment (such as moist compost) where they are able to rest on their laurels, and are forced to put out new roots in order to preserve themselves.

During the establishment time, they are given more shade and higher humidity which encourage the development of roots. I have seen plants established in less than three months, where similar plants, grown in a conventional compost, require up to 12 months to establish. I prefer terracotta pots to plastic in that terracotta acts in the same way as a conventional compost, retaining a certain amount of water and fertiliser.

The terracotta pot can be leached using a heavy application of water (charcoal cannot). The roots are permanently exposed to the atmosphere and plants can be watered daily in summer. In winter water may be applied every second or third day, depending upon weather conditions. The retention of some moisture in the pot stabilises the plant and maintains it in a plump condition. Plastic pots do not have these properties. An empty pot provides fewer locations for cockroaches and other insect pests to hide. The size of the plant and the size of the pot have no direct relationship. These plants have adventitious root systems, and regardless of the size of the pot, they will always check out "greener pastures". I recommend that no pots larger than 15 cm squat pots be used. At my nursery some of the plants are suspended, others are staged upon benches, with similar results in either method.

Vandaceous orchids are relatively free of pests and diseases. The armoured scale is probably the most common insect pest affecting these plants. Regular applications of insecticides and fungicides are advised as a preventative measure rather than curing the problem after it arises. During cold weather the plants become susceptible to fungal and/or bacterial spotting. This may be avoided by spraying and keeping the plants on the dry side during these times.

Seedlings are easily grown provided they have warmer conditions than those required for adult plants, and less direct light applied to them. In Bangkok the plants are grown under very shaded conditions until they are considered to be of blooming size. This, combined with the higher temperature, high humidity and regular applications of weak liquid fertiliser, hastens the rate of growth of these plants. Some growers have been disappointed with early bloomings of some vandaceous hybrids. A small plant cannot possibly display the same quality blooms as a plant twice its size. Allow a plant to bloom three or four times before seriously considering its quality. Vandaceous hybrids bloom three or four times a year once they have become mature, a performance record which is difficult to beat with other genera. Some of the first generation ascocenda hybrids are forever in bloom, developing a new spike before the current blooming spike has finished.

Hybridisation within the vandaceous field is now gathering momentum. The hybridists have to satisfy two schools of thought in this field. For many years vandaceous orchids have been cultivated for the cut-flower trade. This has become a very important industry in S.E. Asia and Hawaii where spray-type hybrids and species are cultivated by the hectare. In many other areas of the world, orchids generally are considered as "pot plants", and in Australia the vandaceous orchids come under this category.

Vandas have long been hybridised in various parts of the world and using many of the colourful species such as *Vanda luzonica*, *V. tricolor*, etc., the species which has influenced vandaceous breeding most is *Euanthe sanderiana*, a Philippine species of rounded form. It has passed this desirable form on to most of its progeny and in doing so it has developed a strain of hybrids which are considered the ultimate in shape and colour. Hawaii had long been the breeding centre for vandaceous hybrids.

Around 1970 Bangkok hybridists, using stock originating in Hawaii, continued the development of these hybrids and today we have

hybrids which are consistently of fine form and colour. Most of today's stud plants have a very high percentage of *Euanthe sanderiana* in their background. Apart from improvements in the basic coloured forms of pink, blue and yellow, a whole new range of colours has been developed. Colour in itself is now a greater priority than shape which is consistently good. The semi-terete and quarter-terete hybrids have been developed primarily for the cut flower trade. While a number of worthwhile hybrids are available, further line breeding with these is blocked by a sterility barrier. The Josephine van Brero hybrids and Emma van Deventer hybrids are very difficult to hybridise and if any seed is obtained it is very low in yield.

Using the cool growing *Ascocentrum* species from Thailand a whole new range of intergeneric hybrids has emerged. The brightly coloured blooms of the *Ascocentrum* species have passed this quality on to their hybrids, at the same time reducing the size of the plant and the size of the blooms. This has made this group of orchids more acceptable as a "pot-plant". These hybrids range in colour from blue, purple, mulberry, red, orange and yellow with many combinations of these. Since the first such hybrid, *Ascda.*, Portia Doolittle *(Asctm. curvifolium)* x *V. lamellata)* in 1949, some very desirable first generation hybrids have been developed. These include the hybrids Meda Arnold, Ophelia, Yip Sum Wah. Some disappointment has been expressed about the early results of this type of breeding. These hybrids were to provide the building blocks for future generations of hybrids which have been more consistent in their quality. Following the establishment of this first generation hybrid, breeding proceeded in two directions. One school of thought was to cross these hybrids with the *Ascocentrum* species to further reduce the size of the blooms, and, to some extent, the size of the plant and also, hopefully, to produce a hybrid where the intense red colour of *Asctm. curvifolium* has been reinforced. The other school of thought was to cross the first generation hybrids with vandas to increase the size of the blooms, and , to some extent, the size of the plant. These second generation hybrids are most satisfactory in that the plant size is manageable in most orchid houses and the blooms carry through the bright colours, influenced by the ascocentrum blood line.

To some, these hybrids are considered the ultimate in this type of breeding, being of good shape, bright colours, and of reduced plant size. Further line breeding has continued, using vandas with second generation ascocenda hybrids to produce third generation hybrids. Some of these are growing as large as their vanda parents, but the brighter range of colours is being carried through to the hybrids. Ultimately the ascocenda hybrids will reach the size of their vanda parents, both vegetatively and florally, but this line breeding will maintain a range of colours, degrees brighter than their vanda parents.

I feel there is a need to maintain breeding plants of second generation hybrids, or first generation hybrids, for there will always be a call for such hybrids. Human nature demands that all tastes must be satisfied.

Many other intergeneric hybrids are being developed, using other vandaceous genera such as *Renanthera, Arachnis, Phalaenopsis, Aerides.* Many of these were originally used for cut-flowers production, producing such spray type orchids as arandas, renantandas, aeridachnis, etc. By line breeding many of the early hybrids have been improved immensely in form and colour, as well as flower production. The focus here has been on the ascocendas, reducing the size of plants and intensifying colour. This type of breeding is very often quite difficult, especially where widely differing parents are used. The amount of seed produced in some of these hybrids is very small, though the development of green pod and embryo culture have assisted in germination of such hybrids.

Many of the intergeneric hybrids are highly speculative but, as with the early ascocenda hybrids, these will no doubt provide some building blocks for future generations of intergeneric hybrids.

Some very interesting advances have appeared in breeding phalaenopsis with various other genera. Perhaps some of the intergeneric hybrids being produced today will not be more than interesting novelties. The future is an open book.

The way is long in improving earlier hybrids. All new intersectional hybrids are speculative in origin, but without man's inquisitive nature and his desire to experiment, we would be without the very desirable ascocenda hybrids we have today. Commercial competition in this type of breeding is very strong and, as new hybrids bloom on smaller plants, the best of these, in turn, are being used to produce further hybrids. One benefit of such intense breeding is that plants are making their initial flower spikes on smaller plants than they did some years ago. Vandaceous orchids have become very popular with orchid growers. The range of shapes and colours, as well as flower form, is almost infinite. Their free-flowering habit has endeared these hybrids to many who have been accustomed to once a year blooming in other genera.

1422 New Cleveland Rd., Capalaba West 4157

Seventh Australian Orchid Conference

Over the last week in September many members of the orchid fraternity will be enjoying the social activities, learning more about orchids, seeing a superb orchid show, and savouring the scenic delights of the Brisbane area.

A hard-working team has put more than two years of effort into ensuring that this will be a most enjoyable occasion for all those able to attend. All those who grow orchids for fun and delight (and that's everyone), are in their debt for the spirit of goodwill and the ideas disseminated will reach right through to every society via the influence of those attending.

For those who have found it inconvenient to attend, this issue supplies some idea of events in Queensland. The article by Mr Ken MacPherson, and its wonderful illustrations, shows the wonderful nature of one of our fine Queensland native orchids. Mr Barry Paget tells about vanda growing which do so well in the north. He shows that vandaceous orchids are worthy of much more consideration by southern growers. And what a supendous vanda is the one illustrated on page 194; *V.* Adam Bull, belonging to Mr and Mrs Williams of Maryborough.

Our cover also demonstrates that there are superb growers of specimen plants in Queensland.

Another feature of the Seventh Conference Show will be an exhibit from Papua New Guinea. As a spectacle we welcome this kindly gesture from our northern neighbour. It is bound to arouse further interest in growing their glorious species, and ultimately this will be reflected in collections throughout Australia.

So, even if you can't be there, the Conference is important to you.

Incidentally a large party of Americans will be at the Brisbane Conference, and another party is being organised for Townsville 1983. If Americans come all that far it's because these events are worthwhile. How much more so for we who haven't far to go.

Eighth Australian Orchid Conference

This Conference is scheduled for August 28 to September 4, 1983. It will be the first Australian Orchid Conference to be held in the tropics and therefore uniquely different.

Many tropical natives will be at their peak, particularly the many forms of *Dendrobium discolor* and some of its hybrids. (See pages 188-189). Vandaceous orchids and many unusual genera rarely seen in the south will be at their best.

The tropical hinterland and offshore islands are experiences every Australian should undergo.

So with nearly twelve months for organisation there is every reason to plan your holiday time for 1983 around the Eighth Australian Orchid Conference period.

Townsville Orchid Society, host society for the 1983 Australian Orchid Conference is organising in thorough fashion. From raffles and donations the Society has raised a considerable sum to ensure that planning will not be hampered by any lack of funds.

Most heartening is the support coming from other members of the North Queensland Orchid Council. Substantial donations towards the show prize trophies are already in hand. Innisfail Orchid Society has donated $200, and Tully OS $100.

Another cheque for $200 was presented by the Mt Isa Orchid and Foliage Plant Society, truly a great effort from a society with only 20 members.

TROPICAL QUEENSLAND ORCHID COUNCIL

The annual TQOC Conference was held at Mareeba over Queen's Birthday holiday weekend. Host society Mareeba organised a wonderful round of feasting, lectures and visiting local collections.

On Sunday a trip was made to Tinaroo Orchids, one of North Queensland's most famous tourist attractions. On Monday calls were made to Walkers Wholesale Nursery, and to rainforest areas.

Frank Slattery made his usual special pilgrimage to the conference and on the Saturday night showed a slide programme of award-winning cattleyas. An auction raised over $700 for TQOC funds.

A very successful conference which symbolised the unity and comradeship of all the North Queensland societies.

NATIVE ORCHID SOCIETY OF QUEENSLAND

For a comparatively small society NOSQ has achieved a phenomenal amount of successes at shows over many years.

This year they won First Prize for their display at the QOS Autumn Show. This is extraordinary when you consider that they competed against societies who could call upon genera from all the world.

This autumn they were also judged the most pre-eminent entry at the Brisbane OS Autumn Show.

This spring they are exhibiting at the SGAP and Orchid Species Society Shows and the Seventh Australian Orchid Conference Show.

All of which indicates some good growers and workers — and a happy society.

SIMPSON ORCHIDS PHONE NUMBER

The article in the June issue on orchid day trips around Brisbane mentioned that Simpson Orchids was a neat commercial nursery worthy of a visit. Unfortunately the phone number given was wrong. It should be (076) 35 1948, and 46 Wentworth Street, Toowoomba, not 48. Sorry Bev Simpson. Hope you have plenty of folk drop in to see you at conference time.

•

"If orchid growing could be reduced to a few simple rules — like dropping in a penny and getting back a flower — then most of the fun and challenge would be gone." *American OS Handbook.*

Orchid Conservation in Western Australia

Dr STEPHEN HOPPER

WA Wildlife Research Centre, PO Box 51, Wanneroo, WA 6065

This report shows that West Australia is very advanced in its approach to orchid conservation. In addition the local native orchid body is primarily conservation-minded to the extent of naming itself the WA Native Orchid Study and Conservation Group. There are many things in Dr Hopper's excellent report for other States to emulate.

Western Australia is well endowed with terrestrial native orchids. Some 150 species and 31 varieties in 28 genera were listed for the State in 1971. Studies since then suggest that at least 30 additional unnamed orchid taxa occur in the south-west.

The majority of WA's species are found nowhere else, so the orchid flora is highly individual. The largest south-western groups include the spider orchids (*Caladenia*, 44 named species), sun orchids (*Thelymitra*, 25 species), leek orchids (*Prasophyllum*, 18 species) and green hoods (*Pterostylis*, 14 species). Among the smaller genera are several bizarre forms including the Underground Orchid *Rhizanthella gardneri*, now famous following its recent rediscovery.

While many WA orchids are widespread and abundant, the State also has an unusually large number of uncommon and elusive species, some so rare that they have been seen only once or twice in recent decades. This adds interest to the field work of the orchid enthusiast because there is always the possibility of turning up something rare or completely new. It also represents a significant problem to conservation authorities. No matter how good the intention, you cannot conserve a rare orchid population until it has been located by someone who recognises it and the relevant information is then passed on to the appropriate Government Department and the landowner. Fortunately, in Western Australia, this is often now happening due to the close liaison and co-operation of all parties concerned.

In this article I wish to give an outline of developments in orchid conservation in the State. Conservation of Western Australian wildflowers has been the growing concern of many individuals and organisations from both the private and Government sectors of the community. However, until recently, efforts aimed specifically at conserving orchids were made almost entirely by private landowners and by members of interested groups such as the WA Native Orchid Study and Conservation Group. A recent example followed the rediscovery in 1977 of the Crested Spider Orchid *Caladenia cristata* by Mr Don Voigt of Esperance. This species hadn't been collected for 54 years, and was located by Mr Voigt on five hectares of uncleared bush on the farm of Mr Norm Scheer. After the identity of the species had been confirmed by Mr Alex George of the WA Herbarium, the WA Native Orchid Study and Conservation Group wrote a successful application to the Australian Orchid Foundation for $150 to pay for fencing of the population of *Caladenia cristata*. Four months after the rediscovery, the fence was erected by Mr Scheer and members of the Orchid Study and Conservation Group, and the *Caladenia* was protected from grazing by stock.

Similarly, many farmers throughout WA have left patches of bush uncleared on their properties because they enjoy their wildflowers and wildlife. In so doing, these farmers have made important contributions to the conservation of native orchids in the wild.

The Government, too, has ensured the conservation of many orchids through its policy of creating nature reserves and national parks throughout the State. At present, 14,300,000 hectares (six per cent of WA), is set aside for conservation of flora and fauna in some 1,070 nature reserves and 50 national parks. These days, any vacant Crown land opened up for agriculture has a certain percentage set aside as a nature reserve. Reserves set aside for other purposes, particularly road reserves, water catchment reserves and State Forest, often retain large tracts of uncleared bush which are also important for orchid conservation. Indeed, in many heavily-cleared wheatbelt areas, road verges contain the only remaining vestiges of native flora.

Acquisition of nature reserves and national parks by the State Government has been aimed largely at ensuring that major ecosystems throughout the State are adequately conserved. To this end, the WA conservation reserve system has been reviewed twice in the past two decades by expert committees. Significant additions to ecosystem reservation in nature reserves and national parks have resulted. The more recent review, undertaken in the early 1970s by the Conservation Through Reserves Committee of the Environmental Protection Authority, was advised by a technical sub-committee which included the noted orchid taxonomist Mr Alex

George. Hence many of the reserve proposals were made with the best available orchid knowledge in hand. Even so, it is apparent now (as it was then to the Committee), that many orchids remain to be discovered and named in the State, and most have poorly-known distributions because so few interested botanists are available to search for them. Hence, it is not surprising that a number of orchids, particularly the rare ones, are not as yet known to occur in nature reserves or national parks.

While progress can and is being made to rectify this situation, effective conservation of all our native orchids will depend on more than the existence of nature reserves and national parks. Successful conservation must also rest upon the goodwill and conscious endeavours of farmers, conservation groups and Government instrumentalities, such as Shire Councils, the Main Roads Department, the Bush Fires Board and the Forests Department.

In my experience, most such persons and organisations are willing to assist with conservation when a particular problem is brought to their attention. For example, at considerable expense, the Main Roads Department relocated the site of a new bridge on the Frankland River after Mr Alex George informed its officers that approaches to the old bridge were flanked by an outstanding array of native orchids including several rare hybrids. The essential ingredients in such a success story include: (i) enthusiasts searching for, locating and correctly identifying orchids in the bush, (ii) the relevant information being written down and passed on to the owners of the land occupied by the orchids, and (iii) the owners planning use of their land in such a way as to ensure the conservation of the orchids. In Western Australia a number of exciting developments aimed at facilitating this process are now underway.

Firstly, the State Government enacted new flora legislation in 1980 that, in many respects, is the most advanced of its kind in Australia. The Wildlife Conservation Act protects all native flora nominated by the Minister for Fisheries and Wildlife throughout the State. To date, the Minister has declared as "protected flora" all ferns and fern allies, all gymnosperms and all flowering plants (including all orchids). Protected flora cannot be taken or destroyed without a license on all Crown lands and the legislation binds the Crown. Hence enthusiasts interested in taking orchids from Crown land for private study and enjoyment must hold a license issued by the Department of Fisheries and Wildlife. In addition, whenever the Crown land has been reserved for a special purpose (eg nature reserve, national park, water reserve, State forest, road reserve), a license holder wanting to take orchids must also obtain the written permission of the managing authority in whom the land is vested. No license is required where an orchid enthusiast takes material from private property, but the owner's permission must be obtained prior to doing so.

While these provisions are not unlike those applying in other States, the WA Wildlife Conservation Act is exceptional in its treatment of rare plants. Under section 23F, the Minister may, by notice published in the Government Gazette, declare plants as likely to become extinct, rare, or otherwise in need of special protection throughout the whole of the State. Once a species is listed in a schedule of gazetted rare plants, no person may take, damage or destroy it or cause the same to occur (eg by allowing stock to graze on it), without the special written consent of the Minister. This applies equally to private individuals and to Government officers, and to gazetted rare flora on private land as well as on Crown land. A breach of this provision may result, on prosecution, in a fine of up to $1,000. The Act allows for compensation to be paid to private landowners who have been refused permission to take gazetted rare flora by the Minister.

In deciding on plants for gazettal as rare, the Minister is advised by the Flora Committee of the Western Australian Wildlife Authority, which has representatives from the Departments of Fisheries and Wildlife, Agriculture (ie the WA Herbarium), Main Roads and Forests, as well as botanists from Kings Park, the University of Western Australia and non-government organisations. The Flora Committee decided that to qualify for gazettal as rare, a plant must have been named by botanists in the correct way, it must have been searched for in the wild reasonably thoroughly, and it must have less than a few thousand known wild adult plants. On these criteria, two orchids were listed in the first schedule of rare flora published in the Government Gazette of November 14, 1980 — the Underground Orchid *Rhizanthella gardneri* and the

FIGURE LEGEND

The 11 orchids currently gazetted as rare under the Western Australian Wildlife Conservation Act — A: Salmon Sun Orchid *Thelymitra macmillanii;* B: Star Orchid *Thelymitra fuscolutea* var. *stellata;* C: Dwarf Spider Orchid *Caladenia bryceana;* D: Sandplain Sun Orchid *Thelymitra psammophila;* E: Brown Leek Orchid *Prasophyllum lanceolatum;* F: Dark Leek Orchid *Prasophyllum triangulare;* G: Underground Orchid *Rhizanthella gardneri;* H: Purdie's Donkey Orchid *Diuris purdiei;* I: Lavender Spider Orchid Caladenia lavandulacea; J: Shy Spider Orchid *Caladenia triangularis;* K: Yellow China Orchid *Caladenia gemmata* forma *lutea.* All drawings same scale, by S. J. Patrick (A, B, C, D, E, F, H, J, K) or L. F. S. Braganca and B. L. Rye (G, I).

GAZETTED RARE W.A. ORCHIDS



Lavender Spider Orchid *Caladenia lavandulacea.*

Only these two were included in the first list because representatives of the Wildlife Authority's Flora Committee had not discussed other possible candidates for gazettal with members of the WA Native Orchid Study and Conservation Group. Discussions along this line, particularly with Mr Andrew Brown, led to the inclusion of a further nine orchids in the revised schedule of rare flora published in the Government Gazette of March 12, 1982 — the Dwarf Spider Orchid *Caladenia bryceana,* Yellow China Orchid *C. gemmata* forma *lutea,* Shy Spider Orchid *C. triangularis,* Purdie's Donkey Orchid *Diuris purdiei,* Brown Leek Orchid *Prasophyllum lanceolatum,* Dark Leek Orchid P. triangulare, Star Orchid *Thelymitra fuscolutea* var. *stellata,* Salmon Sun Orchid *T. macmillanii* and Sandplain Sun Orchid *T. psammophila.* All of these orchids are illustrated and described in reports available from the Extension and Publicity Office, Department of Fisheries and Wildlife, 108 Adelaide Terrace, Perth. A colour leaflet on the Underground Orchid is also available. It is expected that more orchids will be gazetted as rare as knowledge of their distribution improves.

Although the rare flora legislation is potentially a powerful mechanism for conservation, it requires in the first instance a knowledge of the precise locations of rare plants and of the ownership of the lands they occupy. To this end, field surveys of the distribution of gazetted rare orchids have been initiated by myself, by the WA Native Orchid Study and Conservation Group, and, specifically for the Underground Orchid, by Dr Kingsley Dixon.

Dr Dixon was appointed for 18 months to search for the underground orchid on a grant of $29,000 awarded to Dr P. R. Wycherley and Professor J. S. Pate by the World Wildlife Fund Australia. Dr Dixon, assisted by members of the Orchid Study and Conservation Group, has been spectacularly successful in locating some 150 plants of one of the State's most elusive orchids. The majority of these plants occur on a townsite reserve in the central wheatbelt, but two smaller populations occur on nature reserves one of which has been upgraded to Class A status following the discovery of Underground Orchids on it.

To facilitate the rapid communication of survey results such as these to landowners, a number of Orchid Group members are now contributing to a computerised "Atlas of the WA Flora" pilot project run by the Department of Fisheries and Wildlife. Only just getting off the ground at the time of writing, this project promises to be particularly rewarding and effective in getting known locations of native orchids written down in a manner that is most useful for conservation initiatives. One of the first Atlas studies that should be published in 1983 is a survey of orchids on national parks and nature reserves in the Perth metropolitan region.

In addition to field surveys, management of orchids on nature reserves, national parks and private wildflower reserves is a subject that will require considerable research in the future. Data on the response of orchids to fire are essential in a State where fire is used as a key management tool. A knowledge of flowering seasons, pollinators, fruit maturation and mycorrhizal associations will also assist management planners in some instances.

While the main emphasis of this article has been on conservation of orchids in the wild, there are clearly many instances where this is not possible. In some cases, cultivation of orchids is the only option available to prevent their extinction. Fortunately, this has not yet been the case for any known WA orchid. However, the experience gained by growers of native orchids will no doubt prove invaluable for future conservation problems. Moreover, the work of members of the Native Orchid Study and Conservation Group in transplanting orchids from the pathway of bulldozers to a reserve made available by the Nedlands City Council is commendable.

If there is one lesson that the history of orchid conservation in WA can teach, it is that close liaison between private orchid enthusiasts, landowners, research scientists and Government Departments is the surest way to make effective conservation a reality. Ultimately, each of us must decide if we are prepared to make an effort now in this direction so that future generations may enjoy the pleasure and inspiration for which our native orchids are an unceasing source.

NEW AOC PROGRAMME LIBRARIAN

Mr Gunter Haar is now Programme Librarian for the Australian Orchid Council. His address is 39 Aubrey Avenue, Boronia, Victoria 3155.

The AOC slide programmes, painstakingly built up over the years by Mr Gerald McCraith, have proved extremely popular. Societies affiliated with the AOC frequently call upon this service to provide the main feature on a meeting night.

The range of subjects is very wide. Each programme comprises about 60 to 80 slides on average. A typed commentary is supplied with each programme, and of course this may be amplified by a society member who is familiar with the subject.

Affiliated societies not making use of this service should send for a full list of programmes. It's so handy to have for those occasions guest speakers are scarce. If your society is not affiliated enquire for details. The cost is minimal.

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(LUNAGRAD x ANGELICA) FOXFIRE
5½" late May - early June tetraploid



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4½" July plum — diploid

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Mary Ann Simplicity x Poetic Andre
Jean Slattery Dillibirra x Lunagrad
Elanora 4N
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LUMINYA FOXFIRE
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Tribute to Frank Slattery

Frank Slattery and his wife Jean are pictured in a symbolic pose. This photo was taken by Bill Smoothey, a Past President of the Australian Orchid Council.

Frank completes his term as President of the AOC at the 1982 Annual General Meeting. Many worthy presidents have graced the AOC, but Frank is remarkable for the great number of honorary posts he has held over a long period. He has had two terms as President of the Orchid Society of NSW, and was AOC Registrar-General for many years.

Here, some who know him well, speak on behalf of all those orchid growers he has helped in many big and small ways over the past forty years.

Mr Bob Hodgins

"Having known Frank Slattery since orchids were his hobby, and being associated with him in business for just on 40 years a few written words are quite inadequate to describe this man's total involvement and dedication.

No one has travelled more widely at home or abroad to promote a love and understanding of orchids, I am quite sure many growers of today have only one person to thank for having become involved with the joy of growing orchids.

We in Victoria have seen a great deal of Frank over the years and it has always been a great pleasure to have him with us, we wish him well in his retirement from business and the many committees he has served so willingly.

Frank, it has been a great personal pleasure to have known and been associated with you for so many years, I would like to think your intentions are to go back to the days when we first met, and grow a few for fun."

Retirement approved, but not from the scene.

Sincerely,

Bob Hodgins
President, Victorian Orchid Club

Mrs Phyl Nicholas

I first met Frank Slattery some twenty plus years ago when the Australian Orchid Council was in its formative stages. Frank and his compatriots were endeavouring to convince orchid bodies that a unified approach to orchid judging, and particularly judging for awards, was essential for Australia to become recognised in the orchid world.

The result of their work can be seen in the Council as it is today.

Frank again came to the fore when the Tasmanian Orchid Society commenced judging training in 1963. He was always available to answer difficult queries. He pointed individual blooms, sent them to us to judge and made comments and criticisms on our results.

However, I consider his greatest achievement was his involvement with the staging of the Sixth World Orchid Conference. He put in untold time and went to considerable personal expense touring the world and selling Australia. The resulting Conference was probably the most outstanding staged to that time.

Frank has long been a personal friend and we, along with orchid growers throughout Australia, were pleased

to see him eventually take his rightful place as President of the Australian Orchid Council; the same body he was so instrumental in founding.

Congratulations Frank on a job well done.

Phyl Nicholas

Mr Syd Monkhouse

On behalf of The Orchid Club of SA Inc it is my pleasant duty to express our thanks to the President of the Australian Orchid Council, Mr Frank Slattery, upon his retirement from that position.

I am certain that all States will ably cover Frank's outstanding efforts on the AOC in the several positions that he has held and the close interest he has had in its formation and development. We would agree with all the compliments because we consider that no other person in our country has done as much as Frank to help orchid growers and orchid societies everywhere.

In his long association with the orchid game and his successful orchid nursery he has always been a willing promoter of orchids in giving talks, judging and administrating and never could anyone accuse Frank of "blowing his own trumpet" — a quality somewhat unique amongst orchid nurserymen.

We wish Frank continued very good health and happiness and I, personally, cannot imagine not being able to dial his number for valued advice and opinion on many different orchid matters.

Syd Monkhouse
For the Orchid Club of South Australia.

Mr Chas Hill

On behalf of the committee and members of The Queensland Orchid Society, I would like to say thanks to Frank Slattery for the many years he has given to orchids and orchid growers.

He has always been prepared to travel anywhere at his own expense to give advice and assistance to any society or group.

Many years ago when The Queensland Orchid Society decided to change its judging system to the points system, Frank made many trips to Brisbane to assist our judges with the change, always bringing a selection of good flowers with him for discussion.

Later Frank travelled to Townsville in North Queensland to assist them with the Tropical Queensland Orchid Council and to conduct judging classes and an examination. Many of the people who attended those classes are now members of The QOS Tropical Regional Judging Panel.

Frank was on the committee for the planning of the First AOC Conference. And now will be ending his term as President of the Australian Orchid Council, as the second round of AOC Conferences starts.

For his help and assistance to all and his help to me personally may I say once again Thanks Frank and have a happy retirement.

Chas F. Hill
President, QOS

Mr Wal Upton

Congratulations to Frank Slattery on his three successful years as President of the Australian Orchid Council. We all know the Council cannot continue to progress without the inspiration of a good leader. In NSW we are proud, indeed honoured, to know him as one of us. I doubt if any other man displays such an influence on the orchid growers of Australia. His life with orchids is shared with everyone, never is he too busy to offer help to anyone asking it, and the warm personal welcome given by Frank and his wife Jean when visiting the nursery is unsurpassed. The many high offices he has held are proof of his success. Frank's whole attitude and sacrifice of time commands respect.

Who hath said Frank Slattery hath said the orchid lover's friend.

Walter Upton
President, Orchid Society of NSW.

Foundation Applies for Stamp Issue

In June the Australian Orchid Foundation made a further application to the Australian Postal Commission for the issuance of a series of Australian orchid stamps.

Only one orchid has been featured on an Australian stamp, and only because it was the State flower of Queensland, *Dendrobium bigibbum* var. *superbum*.

Dozens of our orchids are more beautiful than many of the subjects which have been presented on our stamps.

You can support the Foundation's action by writing to The Director, Australian Postal Commission, 71 Rathdowne Street, Carlton South, Victoria 3053.

Seed Bank Needs Donations

The Foundation Seed Bank has helped many growers to have the satisfaction of aiding conservation of species. It has helped others with opportunities to broaden their collections. It has also made a modest contribution to the funds of the Foundation and has thus aided other orchid projects.

You can help by selfing desirable species and donating the seed to the Foundation.

Seed of all native species is urgently required because there is a strong demand for it from overseas. What a good way to promote Australia!

Urgently required is seed of genera such as paphiopedilum, cattleya, laelia, oncidium, dendrobium and particularly seed from rare species of any kind.

No hybrid seed is required.

Seed or pods should be wrapped in clean paper. Enclose your name, address, name of species attached to each batch, date of removal from plant, and any special data on the species. Despatch to Mr Graeme S. Banks, 183 Windsor Road, Northmead, NSW 2152.

Requests for seed lists should also be sent to Mr Banks. Seed is supplied at a nominal $1.00 for the first sample, and 50¢ for subsequent samples. Donations to the Foundation above these amounts are welcome.

Every effort is made to supply viable seed, but understandably no guarantee is possible.

To the May River with Andree Millar

ROSEMARY BROMWICH

There were eight people on the May River Tour — Andree Millar, authority on PNG orchids, Marj Purnell, Queensland, Mim Korsman, Queensland, Dick Searle, Queensland, Col Rothenberg, Queensland, Ann Mayles, US, Rosemary Bromwich, NT and Steve Polain, tour organiser.

We met at Port Moresby Airport. A 1½-hour flight by Air Nuigini took us to Wewak on the North Coast. We then transferred to a very small plane. A young German helped us to pack our luggage into the boot, and then hopped into the pilot's seat and off we went. I was dreading the flight, but it was very enjoyable with our view of the lush green country. One hour later we saw a large green field with a few houses and that was Ambunti. We walked from the field to the guest house, wooden with verandahs, where we had lunch with lots of cups of tea. Ambunti consists of a post office, a tin shed with arc mesh and a very dirty store, and this was our last sight of civilisation for a week.

Steve Polain, ex-school teacher and tour organiser, had the "river-truck" all ready. It was a flat-bottomed boat with a canvas top and outboard engine. Our party just fitted in with our luggage. Sonny, our native driver, took us up river for about two hours to Yassam Village. Yassam is very primitive, but has a community centre, no longer used now the Australians have left, where we stayed. We slept on airbeds with mosquito nets. After an evening meal of dehydrated lamb, kau kau (sweet potato) and pumpkin, cooked on an open fire, the natives brought in some lovely orchids: *Dendrobium smilliae* — enormous white bunches of flowers with green spots. *Den. lineale* — some blue and some white. *Den. mirbelianum, Den. acerosum, Den. insigne* and some *Eria* and *Bulbophyllum.*

Later in the evening, children arrived in their canoes with some beautiful, deeply-coloured *Den. lineale* and what appeared to be a natural hybrid of *Den. lineale* and *Den. mirbelianum.*

The Sepik River is very wide and as the local people live off it, it is called the Mother of the People. The children take themselves to school in canoes across the river which is about 400 metres wide.

We soon realised that we could never carry ourselves plus baggage and camping gear in one river-truck. Attempts were made to add an outrigger with a canoe but this did not work, so Steve had to go back to Ambunti for another boat. We spent the morning sitting on carved stools under the houses, drinking cups of tea, talking to the natives and buying a few more orchids and even the stools we sat on.

Steve returned with a "long boat" — an enormous dug-out canoe. They can carry (so they say), 200 cartons of beer or eight drums of fuel. So, up river to Kupkain, about four hours away. Tall pit-pit grass grows along the banks. It is of the same family as sugar cane and used for thatching roofs and the seeds are cooked and eaten, having a floury taste. We also saw sago palms and breadfruit.

At Kupkain Village we were not expected, but made welcome and slept in the priest's house. The priest visits about once a month. Many of the school children were covered with a rash they call "grilli" — but there are no doctors to see to them now.

We stopped for fuel at Iniok, an American mining depot. Everywhere was flooded — the petrol pump and drums, and even the toilet. There we had our first sight of *Dendrobium lasianthera.*

We stopped at Mowi Village for sugar but were not welcome. The men had their faces blackened and were flourishing spears and bows and arrows; apparently some dispute over sago palms was being settled. Dick Searle took photos from the boat which annoyed them. When they started throwing mud we departed hastily before the arrows flew.

We arrived at May River Settelement where *Den. lasianthera* were tied to wooden posts all the way from the river up to the village. Again we were not expected but were made welcome in the unused government agricultural house. We ate local fish, caught by spearing, wrapped in banana leaves and cooked on an open fire — very tasty.

Here we collected *Den. lasianthera.* They were different colours — some a beautiful deep blue and some red and the biggest ceratobium flowers I have ever seen. These were greatly sought after for hybridising.

We went out in canoes, winding our way through the barats (canals) and flooded areas. *Den. lasianthera* grows in full sun on small acacias, often on quite small branches reached easily from a canoe. The natives swam from one tree to the next to collect for us. We paid one Kina (about a dollar) for each orchid.

Den. smilliae grew in enormous clumps on large trees surrounded by ferns which gave them

plenty of shade and moisture. We also collected *Den. acerosum, Den. macrophyllum, Den. conanthun, Renanthera idelfeldtii, Eria* and *Bulbophyllum.* We had plenty of company at May River — lots of rats — but it was worthwhile for the wonderful orchids we collected.

Next day we went further up river to Bitara Village on the April River near the border between PNG and West Irian. Bitara is even more primitive than the other villages. We stayed in a native bamboo hut on stilts with access by a notched pole. It was Andree's birthday and we celebrated with wine, a tinned pudding as a birthday cake and balloons. The natives thought we were mad!

We went for a walk with the local school teacher and collected *Agrostophyllum majus, Coelogyne asperata, Acriopsis javanica, Eria* and *Bulbophyllum.*

Next day we returned down river to Yassam and Ambunti and then onto a lovely lodge at Mindimbit — again not expected. Everywhere was flooded including an avenue of crotons and cordyline in the garden. Here were the luxuries of electric light (till 10 o'clock), showers, real beds, our first beer since Port Moresby. Sunset over the Sepik River was superb — with children in canoes floating by in the foreground.

Next day we departed for Karrawari Lodge. The lodge is on the top of a hill and caters for American tourists and so is very comfortable. There we said goodby to Steve and Sonny and the "river-truck".

Next day we went on our last orchid-collecting trip to Amboin Village. Everyone greeted Andree, as her husband had been an engineer in this area and she had done much of her early work here. She had encouraged the natives to put the orchids onto posts for everyone to see. We went by long boat to Yamas Lakes and collected many orchids including *Robiquetia squamulosa, Sarcanthus* but mostly *Den. lasianthera.* From Karrawari Lodge we went down the Sepik River to the tiny airstrip of Amboin where the village turned out for our departure to Mt Hagen, and so by Air Nuigini to Port Moresby. At Port Moresby we went to the National Botanical Gardens to have our orchids dipped and packed.

The Gardens have a large orchid collection. This was set up by Andree Millar and the orchids put on trees and posts or in pots on hanging frames with Sarlon on top.

On our last day we were taken to a logging area outsided Port Moresby and with the help of Bernard Magaru (from the Botanical Gardens and a member of the Orchid Society of PNG), we collected *Den. williamsianum, Den. platygastrum, Den. smilliae, Den. capituliforum, Den. spectabile, Den. bracteosum.* Our adventure in Papua New Guinea will long be remembered, especially in the lovely orchids we have collected. Steve was not impressed and suggested we all take up stamp collecting!

5 Stirling Place, Darwin, NT 5790

Satellite Finds *Rhizanthella gardneri*

Noting that previous discoveries of this elusive underground orchid had been found in association with honeymyrtle shrub, a team from the University of West Australia's Department of Botany set out to find such areas.

Acting on a hunch, and financially supported by the World Wildlife Fund, they arranged for photos from the 999 km-high Landsat satellite to pinpoint areas of undisturbed patches in the central wheat belt where honeymyrtle is dense.

The team, under Professor John Tate, then painstakingly searched these areas. Result was the discovery of over 100 plants, the largest group yet found.

Rhizanthella gardneri has a capitulum of small, pinkish flowers which last about a month. They barely break the surface of the ground but do not penetrate ground debris. They have a scent like vanilla which attracts pollinating insects.

The area where they have been found has been declared a wildlife reserve.

NSW SIXTH REGIONAL CONFERENCE

There's still time to register. The conference takes place over the holiday weekend, October 2, 3 and 4. Venue for show and sessions is now the Wauchope High School. Registration fee $25. Dinner $8.50. Accommodation available either motel or caravan. Contact Mrs M. Graham, PO Box 193, Wauchope 2446. Phone (065) 83 1552.

Trips to orchid country a feature of weekend. Wauchope is the finest timber area in NSW.

CURRUMBIN SANCTUARY

The Gold Coast Orchid Society is well on the way to having a fine display in the orchid conservation area they are creating in the Currumbin Sanctuary.

Native orchids have been obtained from logging areas, however a royalty has had to be paid. Therefore further donations from growers with surplus native stock will be welcomed. Offers should be addressed to the President, Mr J. W. Bailes, Gold Coast Orchid Society, Box 323 PO, Burleigh Heads, Queensland 4220.

The sanctuary is one of the most famous tourist attractions on the Gold Coast and tens of thousands of people visit there every year to see the wonderful bird life at feeding time.

A visit to the sanctuary is planned as part of one of the tours for the Seventh Australian Orchid Conference.

Readers who know of orchid areas on private property which are being logged would aid this project if they contacted Mr Bailes and supplied the owner's name and address.

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THE PHOTOGRAPH TAKEN 21/7/82 SHOWS THE FLOWERING BUDS ON THREE OF OUR STUD PLANTS.

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DEFLASKING AND GROWING HINTS TOGETHER WITH AIMS OF OUR BREEDING PROGRAMME INCLUDED IN NEW LIST.

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5's (5-7)	$8.50	7 VARIETIES AVAILABLE
10's (10-15)	$12.50	20 VARIETIES AVAILABLE
25's (25 plus)	$22.50	20 VARIETIES AVAILABLE

COMMUNITY POTS OF SEEDLINGS will be available:

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List now available includes miniature and standard cymbidiums, equitant oncidiums, Australian hardcane dendrobiums and miniature softcane dendrobiums.

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Specialising in orchids for everyone



Blc. RUTH MIAO-LI 'YELLOW CUP' ▶

This deep yellow Cattleya measuring 4½"-5" across would enhance anyone's collection.

120 mm Pot. ***$20.00 each.***



◀ ***Lc. MARIA OZZELLA 'MENDENHALL' AM/AOS***

Be early for this one, which is an outstanding flower with its beautiful lip and excellent shape.

120 mm Pot. ***$15.00 each.***



Pot. FORTUNE TELLER 'GOLDEN MOROCCO' ▶

An unusual orchid of good shape and size. Approximately 5"-5½". Its apricot fringe surrounding the lip is certainly something different.

60 mm Pot. ***$7.50 each.***

Blc. RUTH MIAO-LI 'DESTINY' (Intense Yellow)	60 mm Pot	$7.50 each
Blc. DANCING SUNLIGHT 'DE ORU' (Eye-catching Yellow)	120 mm Pot	$15.00 each
Blc. FORTUNE 'GOLDEN RADIANCE', HCC/AOS (Yellow/Red Lip. Fine Shape)	120 mm Pot	$15.00 each

ALL PLANTS PLUS POSTAGE ***CLOSED SUNDAYS***

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Would like to extend to one and all, who would be visiting the

7th AUSTRALIAN ORCHID CONFERENCE

an open invitation to visit the nursery to view the display of orchids or even just for a friendly chat over a hot cup of coffee, which is on tap for the duration of the CONFERENCE.

(CLOSED SUNDAY)

★ ★ ★

Some miscellaneous orchids to choose from:—

		PRICE
C1. LYCASTERIA DARIUS, HCC/NSW x LYCASTE AUBURN 'RONA'		
Cream through to pink. Heavy texture	140 mm Pot	$7.50 ea.
C2. D. CHRYSOTOXUM x D. SUAVISSIMUM		
Sprays of yellow flowers similar to Chrysotoxum	140 mm Pot	$15.00 ea.
C3. D. THYRSIFLORUM x D. FARMERI		
Long sprays of pinkish blooms expected	140 mm Pot	$7.50 ea.
C4. ASCOCENDA MEDA ARNOLD x ASCOCENTRUM CURVIFOLIUM		
Orange to red flowers from this cross	140 mm Pot	$7.50 ea.
C5. BRASSIA GIRREOUDIANA		
Fragrant, long-lasting flowers, colour greenish-yellow with dark brown spots	140 mm Pot	$7.50 ea.

ALL PLANTS PLUS POSTAGE.

BOOK REVIEW

What Pest is That?

An excellent book for people whose garden and orchid house pests have taken them seriously. At times that would apply to most of us. Not all the emphasis is on cure, indeed the theme is that prevention is better than cure.

One point stressed is that over-reaction to pest invasion can cause the deaths of useful insects too. It is important therefore to know which insects are useful and which are the "baddies". The first chapter gets right into doing just that. It then explains cultural controls, and selection of the correct pesticide if the invasion warrants drastic measures. If the latter then the need for safety is emphasised.

Chapter two is a dictionary of common pests and the appropriate method or chemical to deal with them.

The third chapter deals with fungi, bacterial diseases, viruses and deficiency diseases. Then, in alphabetical order, the fourth deals with the problems of individual garden species. This is virtually a check list of symptoms cross-referenced to the pest dictionary in chapter two.

The first part of chapter five is a description of chemical controls in alphabetical order for quick reference. It contains a table of chemicals with their trade name equivalents. The second part has very practical suggestions for eliminating or controlling invasive weeds.

Organic gardening is the theme of the last chapter. Although short it will have tremendous appeal to those who wish to avoid the perils of the powerful, poisonous pesticides.

Copiously illustrated in colour so that the identification of the "friendlies" and the "baddies" is made easy. You need never be in doubt which attack to use once you have identified the invader.

Orchids are not specifically dealt with but the information on ornamentals will apply. Of particular interest to orchid growers is the data on deficiency diseases, their diagnosis and correction.

WHAT PEST IS THAT? GARDEN PESTS: HOW TO IDENTIFY AND CONTROL THEM. Based on data from several sources and the WA Department of Agriculture and edited by Frances Hutchison. Published by Bay Books and distributed by Angus & Robertson. Recommended retail $12.95.

•

Royal Horticultural Society

An International Centenary Orchid Conference to mark the centenary of the establishment of International Orchid Conferences will be held in the Society's Halls in Westminster, London from March 21-24, 1985.

Further information will be released in due course when the programme has been finally formulated.

Applications for the receipt of details should be addressed to The Conference Secretary, International Centenary Orchid Conference, The Royal Horticultural Society, PO Box 313, Vincent Square, London SWIP 2PE (Telephone: 01-834 4333).

BOOK REVIEW

Orchids for the Australian Garden

This book by Keith Irvine of the Ku-ring-gai Orchid Society, Sydney, is probably the best coffee table book so far published in Australia.

It is full of glorious and artistic illustrations and the design is quite beautiful, the printing superb. Thus it is an ideal book for the gardener who wants to know about orchids, or for the orchid grower to have on hand to explain his hobby to visitors when there is not much out in the growing house.

The book is less successful as a grower's manual, although the cultural details are quite accurate. So much space has been given to pictures that the text is only a small part of the book. Some illustrations, too, have been greatly enlarged with no indication of scale. This could mislead some beginners.

A pictorial section on repotting a cymbidium is excellent. More of this type of demonstrative illustration would have made the book more useful.

Genera illustrated and explained cover most of the horticultural range, starting with cymbidiums, natives, cattleyas and moving to the exotic dendrobiums, oncidiums and paphiopedilums. A short final chapter deals with worthwhile species in other genera.

A table showing the flowering months of the genera will be very useful to the grower who looks for the thrill of having something out at all times.

Recommended as a fine coffee table book and as an introduction to orchids for home gardeners.

Published by Bay Books and distributed by Angus & Robertson. Recommended retail $19.95.

•

Orchid Species Society of NSW

Last June issue AOR announced the imminent forming of this new society, and that it would be the third in Australia. A hope was expressed that Victoria and South Australia would follow.

AOR was wrong: Victoria flashed past the post by a short head to become Australia's third species society.

The Orchid Species Society of NSW has been gestating for some months and the first meeting was held on August 18 last just as AOR went to press. Details will be published in the next issue.

The Society is to meet in the Games Room of Lavalla Bowling Club, Windsor Road, Northmead, possibly on the third Wednesday of each month. For confirmation, and other details, phone Mr Ralph Terbutt, (047) 36 2230, or write to him, 33 Joanna Street, Penrith.

•

Orchid Species Society of Victoria

This new society held its inaugural meeting at the Nunawading Horticultural Centre on June 30 last. It aims to foster the appreciation of species and encourage conservation.

This year meeting nights are a little irregular but this will be adjusted next year.

Next meeting is Wednesday, September 29, then Wednesday, October 27 and Thursday, November 18.

For further information contact the Secretary, Julie Landers, Lot 58 South Avenue, Mt Evelyn 3796.

HUGE PRIZES AT RINGWOOD SHOW

Ringwood Orchid Society is centred amidst the undulating hills east of Melbourne. Though only two years old it is one of Australia's most active societies. The first annual show last year was notable for prizes totalling thousands of dollars. The result was spectacular.

These prize incentives are still dramatic. One major prize, donated by the Pellegrino Travel Agency, is a Greyhound Australia Tour. Another prize is a Rite Grow glasshouse. Even the minor prizes are substantial.

The show is at the Eastlands Shopping Centre, Ringwood, from Tuesday, September 28 to Saturday, October 2. For information contact the secretary, Mrs Vicki O'Keefe of 451 Dorset Road, Croydon 3130. Phone 725 4693. The society meets first Tuesday of month at Maroonah High Community Centre, Maroonah Highway, East Ringwood.

SPECTACULAR WINTER SHOW AT NOARLUNGA

The South Coast Orchid Club of SA Winter Show was noted for effective layout in a framework of ARC mesh shade-houses, with paths of marble chips and mounds of scoria and bark.

Lambert Orchids produced the Grand Champion *Paphiopedilum* Barley Sugar 'Beverley', only registered this year from a crossing of *P.* Bandarella and *P.* Sarella.

Special prizes were given for groups of standard, novelty and miniature cymbidiums. The Club meets second Tuesday of month at the Lutheran Church Hall, Windsong Court, Christies Downs. Secretary is Mrs S. J. Stirling, 63 Norrie Avenue, Covelly Park 5042. Phone 277 3830.

$200 REWARD

The Australian Orchid Foundation offers a reward of $200 for the rediscovery of Australia's other underground orchid, *Cryptanthemis slateri.* It has been found in NSW at Bulahdelah, Springwood and Wentworth Falls. Also on the Lamington Plateau in Queensland. Flowering is between October and March.

With the ground removed the rhizome could be mistaken for a fungus growth. It may have branches which terminate in flower heads with a number of tiny flowers.

A discovery should be reported to the Sydney Herbarium. Ask for Mr Don Blaxcell, or, in his absence, the duty officer. Phone charges may be reversed. The number is (02) 27 4347.

For more details and photos of this orchid see the June 1981 issue of AOR.

MELBOURNE EASTERN ORCHID SOCIETY

Mr R. F. Lyster of 3 Martin Road, Glen Iris 2146, has been honorary secretary of Melbourne Eastern since October 1981. The name of his predecessor was given in the June show dates. Our apologies Mr Lyster.

Membership enquiries can be made to Mr Lyster by phone, on 29 3203. The society meets last Monday of month at St John's Hall, Camberwell.

"No one will get far in the study of our plants unless he or she concentrates on learning the scientific method by which they are classified."

M. J. Firth in *Native Orchids of Tasmania.*

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Miniature Cymbidiums
For an exciting selection of seedlings and mericlones from
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Contact Don Stephenson or Norm Chaney of
Ro-an Orchids, 6 Highland Street, Guildford 2161. (02) 681 3294

Altered and New Show Dates

QUEENSLAND

Darling Downs Orchid Association. Eagers Showroom, Margaret Street, Toowoomba. TENTH ANNIVERSARY SHOW. Saturday 18/9, 9 am-9 pm. Sunday 9 am-4 pm. Monday 20th to Friday 24th, 8.30 am-9 pm. Saturday 25th, 8.30-11.30 am. Meets 3rd Thursday of month, Scout Hall, Ruthven Street, Toowoomba. Secretary: Mrs Sue Stone, PO Box 3216, Town Hall, Toowoomba 4350. Phone (076) 32 6513. Visitors to Seventh Australian Orchid Conference can see this and the Toowoomba OS Show as both overlap with the conference.

Ipswich OS. SPRING. RSL Club, North Ipswich, September 2, 3 and 4. Meets first Wednesday of month, RSL Club, Down Street, North Ipswich. Secretary: Mr K. Imhoff, 10 Cramp Street, Goodna 4300.

John Oxley District OS. No Spring Show. Meets 2nd Wednesday of month, Uniting Church Hall, Oxley Road, Sherwood. Secretary: Mr H. Faber, PO Box 205, Corinda 4075.

Orchid Species Society. SPRING. Mt Coot-tha Botanical Gardens Theatrette, 10/9, 9 am-9 pm, 11/9, 9 am-5 pm. Meets Mt Coot-tha Theatrette 3rd Monday. Secretary: Mrs P. Campbell, PO Box 485, Toowong 4066. Phone 204 2072.

Redcliffe District OS. SPRING. Kippa-Ring Shopping Village. Wednesday 8/9 to Saturday 11/9, hours 8.30 am-5.30 pm each day. Meets 2nd Wednesday CWA Hall, Victoria Avenue, Woody Point, Brisbane. Secretary: Mrs N. Feakins, 91 Cutts Street, Margate 4019. Phone 284 1587.

Southport and Districts OS. SPRING. Burleigh West Shopping Centre, September 9, 10 and 11. Meets SCWD Hall, Burleigh Heads, 2nd Sunday in month at 1.30 pm. Secretary: Mr Allan Hughes, Box 5336, Gold Coast Mail Centre 4217.

Sunshine Coast OS. SPRING MINI-SHOW. Civic Centre, Caloundra, October 1 and 2 (Friday and Saturday. Note: NOT Sunday as in June issue). Cultural notes given with each plant sale. Secretary: Miss A. Hall, PO Box 279, Caloundra 4551.

Townsville OS. SPRING. Eagers Showrooms, Flinders Street. Saturday 4/9, 9 am-9 pm, Sunday 5th, 9 am-5 pm. Secretary: Mr S. Goldsworthy, PO Box 83, Townsville 4810. Phone 73 2363. Meets 4th Friday of month at South's Junior Rugby League Club Hall, Pioneer Park. Host society for Eighth Australian Orchid Conference, 1983.

NSW

City of Lismore OS. SPRING. City Hall, Ballina and Molesworth Streets, Lismore. Monday 13/9 to Thursday 16/9. Coincidess with Lismore Septemberfest Celebrations. Always a nice show. Meets 3rd Tuesday, Red Cross Rooms, Keen Street. Secretary: Mr J. Hartley, 3 Crown Street, South Lismore 2480.

Manning River OS. SPRING. Taree High School Hall, Thursday 9/9, noon-8 pm, 10, 9 am-8 pm. Meets 1st Friday in Lodge Hall, Manning Street, Taree. Secretary: Mr Bob Zeller, PO Box 797, Taree 2430. Phone (065) 53 1157.

Lidcombe State Hospital OS. In addition to the Show at Bankstown Shopping Square, September 13-18 as in June issue, this society will be holding its 18th Annual Orchid Festival at the Lidcombe Hospital, Joseph Street, Lidcombe, in conjunction with Hospital Fete. Friday, September 10, noon-9 pm, Saturday 9 am-4.30 pm.

SOUTH AUSTRALIA

Riverland Orchid Society. SPRING. In Loxton A&H Society's Hall, Monday 11/10, 9 am-5 pm. A display will also take place at Berri. Members come from a wide area and cymbidiums and cool-growing cattleyas are predominant owing to extreme weather conditions. Meets 2nd Sunday of month at 2 pm in Senior Citizens' Hall, Loxton. Visitors are always very welcome. Secretary: Mrs W. N. Tschirpis, PO Box 340, Loxton, SA 5333. Phone (085) 84 7177.

WEST AUSTRALIA

Wanneroo Orchid Society. SPRING. Whitfords City Shopping Centre, Hillarys. Thursday 9/9 to Saturday 11/9 in shopping hours. Meets 3rd Thursday of month, Wanneroo Civic Centre, Lesser Hall. Secretary: Mr R. L. Stapleton, 11 Chrysostom Street, North Beach 6020. Phone: Home 447 6821, business 447 1255.

TASMANIA

Scottsdale OS. SPRING. Friday 24/9, noon-9 pm, Saturday, 9.30 am-9 pm, Sunday 26/9, 10 am-5 pm. Meets 3rd Thursday of month, Kendall's Hotel, George Street, Scottsdale. Secretary: Mr W. Pinner, Bangor, Tasmania 7254. Phone (003) 95 4136.

VICTORIA

Mornington Peninsula OS. SPRING. St Paul's Church of England Hall, Bay and High Streets, Frankston. Saturday 9/10, Sunday 10/10. Set up 8/10. Meets 4th Friday of month. Secretary: Mr L. G. Smith, 13 Glamis Avenue, Hampton 3188. Phone 598 6476.

Warringal Orchid Society. Venue is not as given in the June issue. Show is to be at Heidelberg Technical School, corner Bell Street and Waterdale Road, West Heidelberg (nearly opposite Repatriation Hospital). Dates are the same: 9/10, 10 am-9 pm; 10/10, 10 am-5 pm. Secretary: Mrs M. Murray, 60 McArthur Road, East Ivanhoe 3079.

Vale

The passing of Mr George Woolley came as a sad shock to orchid folk across Australia. The late Mr Woolley was well known in Victoria as a fine grower, a past president and life member of the Melbourne Eastern Orchid Society and judge of the VOC. He was known throughout Australia for his work as Programme Librarian for the Australian Orchid Council over many years. His many friends will miss him.

Orchid growers from all over Australia were saddened to learn of the passing of Mrs Madge Rentoul. Mr Jim Rentoul is Australia's best known writer on orchids, in addition he has devoted all his energies to work for orchid societies. Only the interest and support of his wife could have made this possible. Mrs Rentoul was an active member and worker for societies in her own right.

The genus *Epidendrum*

This prolific genus is indigenous to the American continent as can be guessed by the hybrids made with the cattleya alliance. Generally the majority of epis, with which we are familiar, flower at Christmas time when flowers are usually scarce. Many have smooth round squat pseudobulbs which bear many long lasting flowers carried on strong erect spikes in a very wide range of colour and form. Some are scented.

It is essential to pot them in a small container with coarse well drained compost. As their name signifies they are tree dwellers in nature.

Desirable clones include *E. nemorale, E. prismatocarpum, E. pentotis, E. stamfordianum, E. radiatum, E. vitellinum* and *E. alatum.* In conclusion epis are a delightful facet of a balanced collection —Jim Cummings in *North Shore Orchid Bulletin.*

Note. *E. atropurpureum* was mentioned by Mr Cummings in the above is now correctly known as *Encylia cordigera.* It is a worthwhile addition to any collection.

ELEVENTH WORLD ORCHID CONFERENCE

Thousands Raised

Huge crowds flocked to the 38th International Orchid Show, aptly named Tropical Fantasy, to see an imaginative display of orchid colour and tropical environments. Those at the gala opening party bid for art items and orchid plants at an auction organised by Dr Carl Marlone. Several thousand dollars were raised to benefit the March 1984 Eleventh World Orchid Conference, thanks to the talents of auctioneer Jim Gall.

In March 1984, this annual show of the South Florida Orchid Society will be replaced by the Conference Show, for which the society is host.

The Conference Show is to be held in the newly-renovated Coconut Grove Exhibition Centre, alongside the Coconut Grove Marina and Biscayne Bay. The centre is to have its 8,000 square metre patio area roofed in time for the show. This will ensure a total exhibition space of 30,000 square metres. The site is ideal.

Miami is currently undergoing massive re-development. It's clean, contemporary and vibrant, largely due to the impact of two billion dollars in investments. There are 2,000 new first class hotel rooms, including those of the Hyatt Regency and the Pavillion, host hotels for the Conference.

Conference activities and programmes will be held in the City of Miami's James L. Knight Conference Centre, part of the Hyatt Regency complex. The centre has a 5,000-seat auditorium and numerous meeting rooms. These facilities are luxurious and have technologically-advanced equipment.

The Eleventh World Orchid Conference has had many requests for information pertaining to Conference registration, hotel registration and commercial space booking. Much work is being done in these areas by the respective committees but it is premature to accept any kind of registration. By way of example, hotel rates will not be in effect until 1983. The Committee will gladly keep any requests of this nature on file as long as confirmation is not expected.

Planners of the Conference are determined to go beyond the ordinary to ensure the Show will be more than "just an orchid show". They aim to make it unique and have retained an award-winning landscape firm to design an appealing and innovative scheme.

In Australia the various States are still assessing the matter of organised tours. Largely owing to the inflation problem it is not possible at this stage to obtain firm quotations from travel agents. This journal will publish full details as they become available.

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567: Phal. Lady Ruby 'Zuma Canyon' HCC/AOS x Phal. Barbara Freed Saltzman 'Jean McPherson' AM/AOS – Pink with stripes. $5.00.
543: Phal. Ella Freed 'Supreme' AM/AOS x Phal. Debbie Wallace 'Malibu' HCC/AOS – Stripes with red lips. $5.00.

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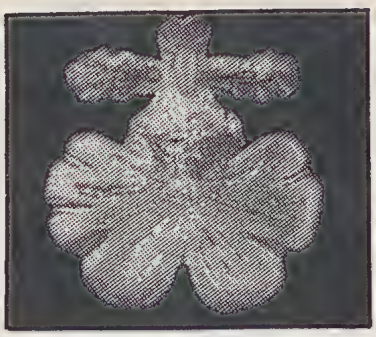
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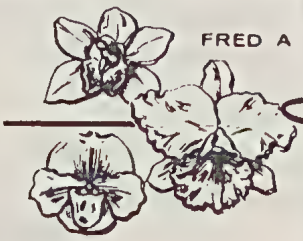
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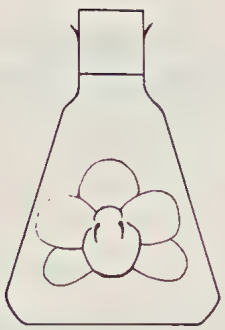
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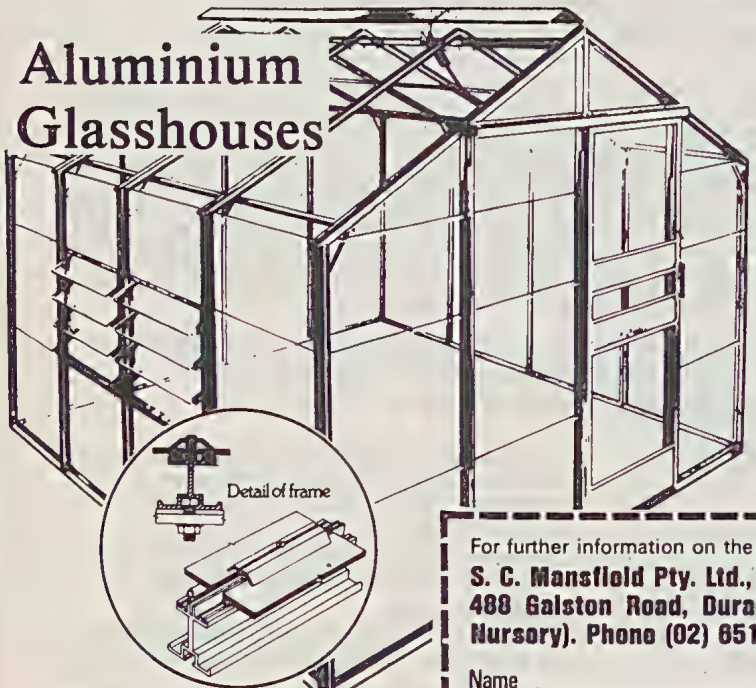
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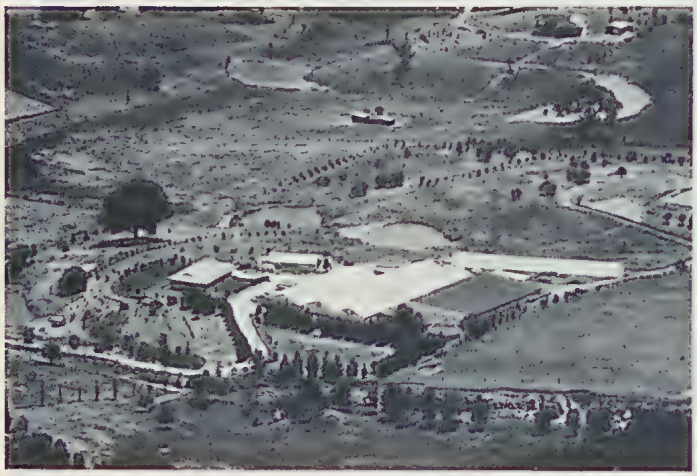
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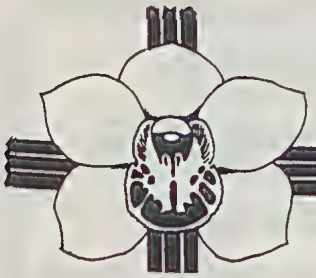
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HIGHLAND MIST 'DILLABIRRA'
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*Indicates that other varieties with same registered grex are available.

Send for the descriptive list with twice as many mericlones as are listed above plus 60 1981 seedling crosses made for ultra-early, early and bright colour flowering. The list incudes local agents.

PRICE. Size A plants (15-22.5 cm or 6" to 9" leaf length) cost $6.50. Some varieties as listed in catalogue are available in Size B (22.5 cm to 37.5 cm — 9" to 15") for $1.50 extra.

DISCOUNT. As set out in catalogue price is $6.50 each for first 10 and then reducing stepwise to $4 depending on quantity bought within six months.

NOTE. Post and freight at about cost. Notes as set out in catalogue apply to sales.

FLASKS? Send for lists with many of the above plus many exciting new varieties $23 for 10 or $42.50 for 25.

New breakthrough in Orchid Culture Media

We have just perfected our new mother flask and replate media! Our media do not require any adjustment of pH — just weigh the specified amount of powder, add the fruit extract specified and heat to a near boil, pour into flasks or bottles and sterilise. Perfect every time!! Each pound of media makes over 100 mother, or replate flasks (500 ml at 150 cc) at a cost of just pennies each. Our media grows all genera rapidly — Phals. in four months, Cats. in less than six months. Our media also grows cyps, angraecums, cymbidiums, dendrobiums, vandas, odontoglossums, and oncidiums with great speed. The secret is in the buffering — our formulation adds carbon dioxide into the flask which speeds growth by feeding the seedlings like no other media marketed. Also our media requires only six hours of artificial light for maximum speed of growth! This saves those kilowatts and lighting expenses! Both mother flask or replate media (one pound size) costs each $26.50 plus shipping, air $15.00, surface $5.00 U.S. dollars (please allow six weeks for surface delivery by sea). Order 10 pounds in bulk and deduct 30 percent off pound price. We invite distributor inquiries. We also carry a complete line of chemicals for the do-it-yourselfers. Send for our new catalogue of over 100 crosses in flask, and our new seedling listing. We can ship to most areas through the winter season.

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MINI-FLASKS

All $10 each

CYMBIDIUM SEEDLINGS

Allow 4 - 6 months from date of order so that flasks can be replated and grown on.

(Minimum of 10 plants per flask)

SOUTHBOROUGH 'GREEN MEADOWS' x POETIC 'ANDRE'
Specifically for fine decorative spikes in green to white. July-September.

LUNAGRAD 'ELANORA' x SUSSEX DAWN 'DOROTHY MAY'
A remake — fine greens are coming from this cross. June-August flowering.

BUNDAH
A remake (Sensation 'Vieux Rose' x Babylon 'Castle Hill') made for dark reds and pinks in September.

CARIGA 'CANARY' x ALNWICK CASTLE 'BRENTWOOD'
A remake of Sovereign Hill — fine yellows have resulted.

LUNAGRAD 'ELANORA' x VIEUX ROSE 'DELL PARK'
Greens, pinks and polychromes should come from this cross.

LUNAGRAD 'ELANORA' x DORAMA 'FAIRFIELD'
This makes Flagstaff Hill — expect mainly greens.

CARIGA 'CANARY' x SUSSEX DAWN 'DOROTHY MAY'
Fine yellows and greens should come from this shapely combination.

SOUTHBOROUGH 'GREEN MEADOWS' x LUNAGRAD 'ELANORA'
Fine decorative greens from June to September.

SOUTHBOROUGH 'GREEN MEADOWS' x SUSSEX DAWN 'DOROTHY MAY'
Fine decorative green diploids. Southborough 'Green Meadows' was the fine diploid used to make the Noarlunga cross which produced the superb Noarlunga 'Enfield' AM/OCSA/AOC.

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RUSS MARTIN 'SUZANNE' — Lovely, clear August yellow, red-barred lip ..... Plants $5 and flasks available
SAN MIGUEL 'LIMELIGHT' — Large, early June green, upright spike ..... Plants $6 available
SENSATION 'AMINYA' — TOP quality, intense September red flower ..... Plants $8 available
SENSATION 'MELITA' — Fantastic red September flower ..... Plants $6 and flasks available
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SUSAN HUGHES 'R. D. HUGHES' — Large, pastel green, September/October flower ..... Plants $8 and flasks available
VIA REAL 'ALEXANDER' — Lovely, large, light pink — one of best ..... Plants $6 available
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SWEETHEART x AURIGA GRACE — July/August yellow with bold, barred lip ..... Plants $6 available
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TOM THUMB 'CALLIOPE' — August/September green, broad, white lip, red markings ..... Plants $6 and flasks available

*FLASKS: Full 25-30 plants $50 — Half 12-15 plants $28 **except Highland Mist 'Jayne' — Full flasks $75 and Half $40**. These healthy mericlones are forwarded bare-rooted by air, rail or express mail. MAIL ORDER ONLY. Cash with order. PACKAGING AND DELIVERY — AIR MAIL add $9 all States in Australia (NSW ordinary mail $4). When Air Freight required (send address and phone number). Freight to be paid on delivery — add $2 handling charge.*

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MS.1279	SLC. EMBERGLOW 'FIRE MOUNTAIN' — *fiery red*	2" pots
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MS.1013	BLC. FAYE MIYAMOTO 'POKAI', AM/AOS — *large gold*	2" pots
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MS.598	BLC. GOLDEN EMBERS 'CHRIS', AM/AOS	2" pots
MS.781	LC. RAINBOW GLOW 'NUNG JUAN' — *yellow/red lip*	2" pots
MS.52	LC. DRUMBEAT 'TRIUMPH' — *large lavender*	2" pots

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NOVEMBER 1982

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(2) Mericlone flasks.
(3) Community pots immediately available.

PHALAENOPSIS

(1) Flasks.

VENUS FLY TRAPS

(1) Wholesale Plants.
(2) Flasks (export only).

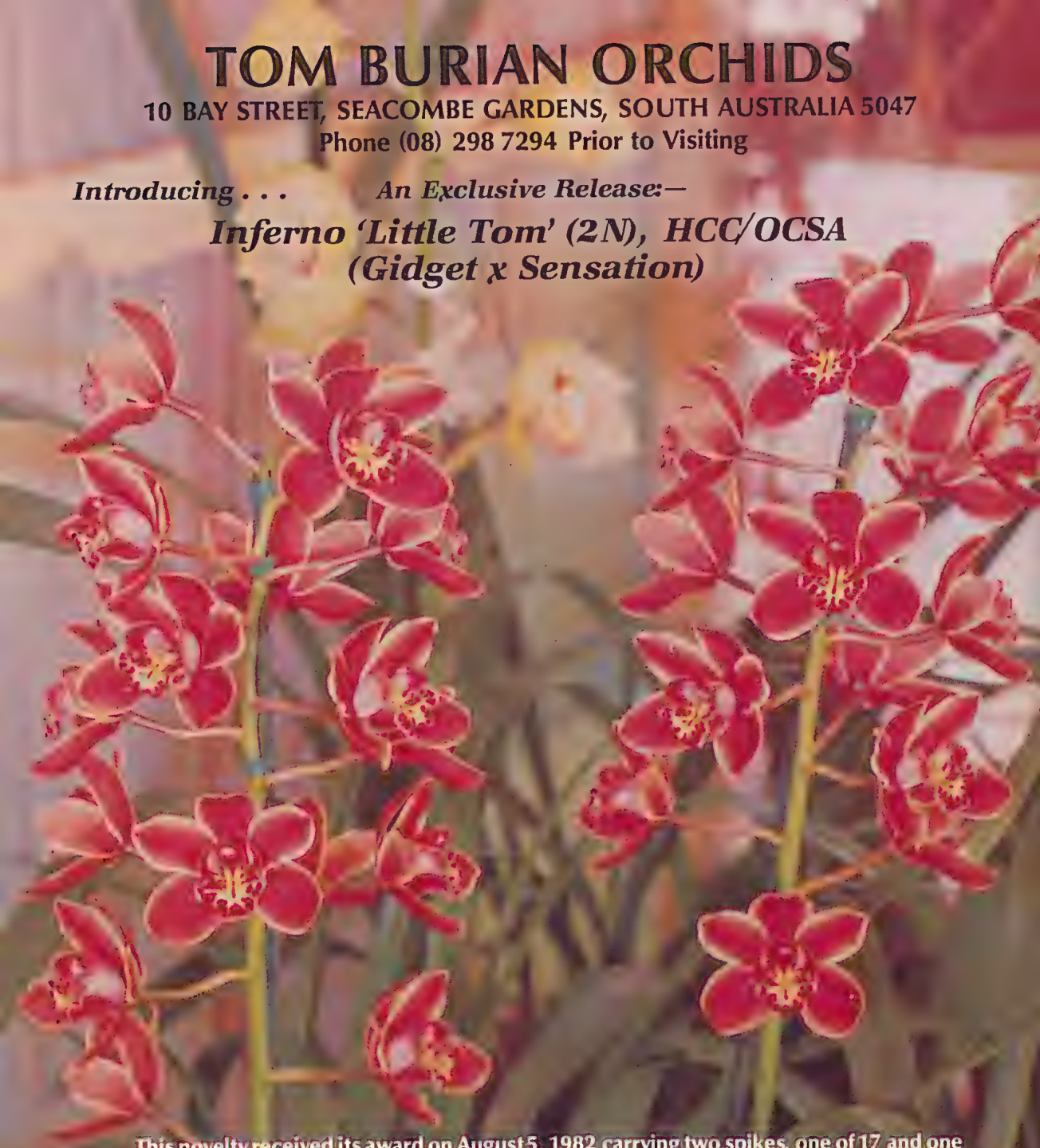
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Introducing . . . *An Exclusive Release:—*

Inferno 'Little Tom' (2N), HCC/OCSA
(Gidget x Sensation)



This novelty received its award on August 5, 1982 carrying two spikes, one of 17 and one spike of 15 "on its second flowering". The colour is red with an unusual yellow edging. The clone flowers in early July and also breeds well as a diploid.

Condition of Release:— A release will not be effected until a specific number of plants etc have been ordered.

PRICE:— BULB AND LEAD MERICLONES @ $30 EACH.
FLASKS OF 25 MERICLONES @ $150 EACH.

Period of Release:— Approximately May-September 1983. Please DO NOT forward any money with your order.

Divisions of the original clone will also be released, all enquiries welcome. There will be discounts on large orders.

AUSTRALIAN Orchid REVIEW

DECEMBER QUARTER
Vol. 47 No. 4

Printed and Published by:
GRAPHIC WORLD
14 McGill Street, Lewisham 2049
560 6166

- **Editorial Associates:**
QUEENSLAND: Mr Frank Oelkers, 419 Robinson Road, Geebung 4034.
VICTORIA: Mrs I. Hutchins, 37 Elliot Street, Mordialloc, Victoria 3195.
SOUTH AUSTRALIA: Mrs Joan McLean, 7 Clearview Crescent, Clearview 5085.
WESTERN AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154.
TASMANIA: Mr C. Nicholas, 7 Kelvin Avenue, Moonah, Tasmania 7009.
INTERNATIONAL: Mr G. H. Slade, Box 797, Vila, Vanuatu.
- **Editor: Ronald Kerr.**
- **Editorial Committee:**
R. KERR, S. WALDIE
G. HANSEN, D. SYMONDS
R. MILLER
- **Address Editorial to:**
R. KERR, 260 Geoffrey Road
Chittaway Point, NSW 2259
Phone: (043) 88 2605
- **Advertising, address to:**
ELIZABETH LOWE, 14 McGill Street, Lewisham, NSW 2049.
Phone (02) 560 6166
- **SUBSCRIPTIONS.** 1983. Within Australia $14.00. Overseas surface $16.00 or $US18.50. Airmail rates on request.

TO JOIN AN ORCHID SOCIETY
Contact these secretaries:
NSW: Miss B. Oldfield, 61 Mountford Avenue, Guildford 2161.
QUEENSLAND: Mr W. Murphy, GPO Box 2002, Brisbane. Phone: 377 3253.
VICTORIA: Mrs I. Hutchins, 37 Elliot Street, Mordialloc, Victoria 3195.
SOUTH AUSTRALIA: Mr D. J. Harris, 36 East Avenue, Black Forest 5035. Phone: 297 7525.
WEST AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154. Phone: 330 2132.
TASMANIA: Mr J. F. Smith, 11 Warren Court, Howrah 7018. Phone: 44 1555.
NORTHERN TERRITORY: Mr A. McGregor, PO Box 38493, Winnellie 5789. Phone: 81 8436.

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To comply with the International Code of Botanical Nomenclature the whole of a species name is in *italics* and the second term has no capital. With hybrids only the first term is in *italics*, the second starts with a capital and is not latinised. Generic names, used in a non-botanical sense do not have a capital nor are they in italics. In society bulletins and on place cards italics can be indicated by underlining.

COVER STORY

Cattleya Princess Bells 'Betty's Bouquet', AM/AOC-NSW has been voted "Orchid of the Year" by all the State judging panels in Australia. It has been cultured by Mr and Mrs R. Saunders of Casino, NSW. It is from a cross of two proven parents. C. Empress Bells and C. Bob Betts. For further information on AOC Awards see page 269 and illustrations on pages 266 and 267.

A New Zealander at the Seventh Australian Conference

DULCIE SPEHR
Mrs Spehr is Newsletter Editor for the Whangarei Orchid Society

Our trip to Australia from start to finish was absolutely wonderful. Tom Graham, our team leader and bus driver had the bus arranged and drove us down to the airport. Qantas treated us very well and we had a very enjoyable trip.

A deluxe bus was waiting for us and John Maynard of the Brisbane Orchid Club was there to meet us and escort us to a very nice new Apartment Block "The Summit".

On Tuesday our "Host Club" — Redcliffe — had arranged a "day on them" for us. A bus picked us up and took us the fifteen miles north across the new longest bridge in the Southern Hemisphere to Redcliffe. Here we were met by their President who left some of us with Jimmy and Betty Raddatz of the "Humpybong Orchid Nursery", took some (on the bus) on to The Keith Howard's, and the third lot on to the Feakin's. The bus then shuttled us from one to the other. What a lovely time we had, and what a difference in the set-up of orchid houses to what we are used to. Their orchid houses are filled with A frames, made with steel mesh like our reinforcing mesh used in concrete walls, etc. They did not have many cymbidiums and most of their other genera were in small pots. These were hung on the square sections as thick as they could stick. In a small room like our mower shed there must have been about 500 small containers. What a saving of space and how easy to water. In the ground they put plastic, then a lot of newspaper, then gravel. This cools the shed.

We had been treated so royally that it was impossible to know that the best was still to come. Our next stop was at the home of their president and his wife, and all their club seemed to be there with a fantastic smorgasbord laid out for us. The orchid houses here followed the same pattern but were on a much bigger scale. The A frames were there allowing so many plants in a fifth of the space that we would need. A drive around the waterfront ended in the City Council Chambers where the Mayor and his staff had afternoon tea for us as their guests. How wonderful that the entire City (about the size of Whangarei) accepted us as "their" responsibility and pleasure.

Thursday was setting up of the show day and Syd and Shirley as arranged at our "Trip Meeting" co-opted as many willing helpers as space allowed. Redcliffe again could not have been more helpful. They supplied all Syd had asked for in the way of plants, shrubs, etc. Our display won the section for overseas (International) and inter-state courts. There were eleven entries including Japan, Papua New Guinea, Thailand, Taranaki, and ours, and six from Australia other than Queensland. So congratulations to those who set it up, with maybe top marks to Shirley who, as at Ellerslie two years ago, added the finishing touches. Dulcie Spehr's entry *Cymbidium* Bulbarrow 'Northland' took out a third in the miniature section 'red or pink'.

Those not setting up the show stand had an extra bonus in attending the Toowoomba Orchid Show. Some 100 miles inland, and on a plateau this area is cold enough to grow cymbidiums well, and a good show it was. *C.* Fort William 'Hamsey', captured the Grand Champion prize and seedlings of *C.* Hamsey 'The Globe' x Wallara 'Gold Nugget', appealed to me. Toowoomba is known as the "Garden City" of Australia and it was garden week. We were taken around to see about nine gardens and they were really outstanding BUT the rest of the town seemed to have little or no gardens.

The Australian Conference Show was very impressive — rather like the N.Z. Conference at the Epsom Show Grounds, but more cramped for room. The Champion Cymbidium was Burgundian 'Bexley', and the other Burgundians appealed. *C.* Ivy Fung 'Radiance', won the Novelty Section. Syd and Joy Wray, Shirley Gray and Dulcie Spehr were on the Judging Panels. To put up and dismantle Syd and his team put in a tremendous amount of work. At the dismantling, what a great crowd the Redcliffe men were. Their co-operation was fantastic and if ever any of their Society can come to Whangarei we can thank them.

The Conference Secretary, Tania Tinney was worked to a rag and her associates had done a great job.

Socially there was a 'Get-together' and two big dinners for those who wanted to go. Travelwise, there were tours most days but unfortunately some of these clashed with lectures that were too good to miss. The one that fascinated me was John Hanes USA on Paphs. He wife and Barry Paget ran TWO projectors as fast as he could talk. Most of us did the "Sunshine" (south) and "Gold" (north) Coast trips which certainly are "musts", and the O'Reillys trip which did not show enough orchids but gave us a fine insight into the mountain area.

Shopping in Australia is so interesting that most of us came home broke. The two days in Sydney was well worthwhile — she sure has a beautiful harbour, which is my cup of tea. Most of the others had dinner in the revolving tower and did the Night Clubs. They all enjoyed it. A bus to meet us at Auckland and good old Tom Graham to drive us home was a wonderful finish. Thank you Tom.

69 Fourth Avenue, Whangarei, NZ.

ORCHID STAMPS — HOW TO FIND THEM

GAY AND GRAEME CHEQUER

Years ago, while growing just a few orchids we became interested in what we thought would be a relatively uncomplicated sideline, collecting orchid stamps. To begin with we perused stamp shops, finding many delights.

To aid our search we began sifting through *The Stanley Gibbons World Stamp Catalogue*, a British publication. An arduous task — page by page of fine print — but most rewarding to an enthusiast when another hitherto unknown stamp was discovered and added to the growing list. (By this stage we believed we were looking for a total of approximately 500 stamps to complete our collection).

As our contacts widened we came in possession of *The American Topical Association Handbook No. 61 — Flowers on Stamps*, by D. Patterson, published in 1968. This is a checklist of flowers on stamps. The stamps were listed with their date of issue, botanical name and a brief description. This brought to light many more treasures, including new catalogue numbers from *Scott's Standard Postage Stamp Catalogue*.

At about the same time we found another listing, *Catalogue of Flowers*, by J. M. Vidal Torrens — in Spanish. Fortunately the botanical names are in Latin so we were able to identify many more stamps that were needed in our collection. This catalogue uses *Yverts* — a European catalogue.

We now possess a complete set of four volumes of *Scott's Standard Postage Catalogue* (an American publication), and have found it a most useful aid as it lists many more issues that Stanley Gibbons hasn't recorded. To save buying these expensive catalogues each year and to keep up-to-date with current issues one can purchase at newsagents *Stamp Monthly* which has Stanley Gibbons and *Stamp News* which has Scott's supplements in them.

The popularity of this orchid theme is evidenced by the publication of *Die Wilt Der Orchideen auf Briefmarken (Orchids on Stamps)* by Schwab and Stephan. This was published in conjunction with the 8th World Orchid Conference in Frankfurt. It was divided into three parts; the first covering the date of issue, value and valid botanical name. The second a short botanical description and the third — the stamps illustrated in black and white. In 1979 W. & L. Stephan and Dr O. Schweighart published a far more comprehensive listing, this time with colour photographs of stamps. A supplement to this was published late in 1981. Unfortunately, for most of us, the text of these last three publications is German; but by using this up-to-date book, we now have yet another catalogue as a cross-reference, *Michels*.

Also listed are some First Day Covers (FDC) including First Day of Issue and other issues with specialised cancellations featuring orchids. Another interesting feature is a list of 13 aerograms from several countries — some of which have the stamp featuring the orchid, others are pictures printed on the aerogram.

We are waiting now to receive a copy of the latest known catalogue, described by the distributor as — "At last it's here! A book on orchid stamps — and in English too!" *Orchid Stamp Collecting* by H. Wilshaw. Not being able to comment on the production but, having recently met the author, we look forward to this presentation.

'Cinderellas' — a most unusual collection of orchids. An old definition for these items is "a stamp that isn't listed in a catalogue".

Where do we go? Recently we read an article which mentioned that some 'Cinderellas' are listed in some catalogues but not one is comprehensive. We are aware that this is a contradiction of the earlier definition but collectors are still trying to grapple with this question. *Minkus* is reputed to have the "best list" but certainly not all.

So if you are contemplating collecting orchid philatelic material (in excess of 1,700 stamps) — *Happy Hunting.*

51 Wellwood Street, Lenah Valley
Tasmania 7008

BOOK REVIEW

Orchid Stamp Collecting

H.S. Wilshaw

Subtitled "A guide to starting a collection of stamps portraying orchids" this book can open new doors for any orchid grower.

Thematic stamp collecting is now very much the "in" thing. It is a relatively and inexpensive way of building up a coherent collection in line with the collectors other interests.

Orchid growers who collect orchid stamps are rewarded by having a colour picture reference guide to the appearance of orchids they might otherwise only read about, or even not know about.

The first section lists some hundreds of stamps in alphabetical order of countries. Orchid issues within those countries are listed chronologically. The par value is given along with the Stanley Gibbons Catalogue number.

The second section consists of 18 pages in colour with, from 20 to 40 stamps per page.

This is the first specialist book in English on orchid stamps. Thus it will introduce many philatelists to the world of orchids. Assuredly it will help many orchid growers to enjoy philately.

There is a short but useful guide to the backgrounds of some orchid species. Also a list of stamps issued for some World Orchid Conferences.

A second volume is in preparation.

The book is available from M.M. Orchid Sundries, C/- H.G. Hees, 99a Kiln Ride, Wokingham, Berks., RG11 3PD, England. Price not available but not expensive. It is recommended you write and order for either surface or airmail delivery. You will be invoiced for cost and postage. Alternatively your local stamp dealer may have it or arrange to get it.

A letter from Vanuatu

The Editor,

Subject: **Vanuatu Orchids Stamp Issue**

I have just had the pleasure of reading your splendid illustrated article in "Australian Orchid Review", September quarter Vol. 47 No. 3.

Unfortunately there appears to have been a misunderstanding somewhere along the line, the orchids issue is not Vanuatu's first ever stamp issue but it is the first Vanuatu *definitive* issue to have been produced in *one* form only. The previous definitive issue, a reprinted version of the earlier New Hebrides/Nouvelles Hebrides maps issue was produced in separate English and French versions as were some of the early Vanuatu commemorative stamp issues.

In fairness to your readers and to set the record straight, I should be grateful if you would issue an amendment in your next edition.

Also in Vol. 47 No. 3, I see a plea to Australia Post to produce a set of stamps featuring orchids, a splendid suggestion which I trust will come to fruition.

Your sincerely,
M. Vaughan
Vanuatu Philatelic Bureau for
Director of Posts and Telecomms.

IANA NOT ANA SAYS AUGUST COMMITTEE

It seems that those botanists who went to schools where the latin suffixes *iana* or *ianum* was preferred outnumbered those whose schools favoured *ana* at a meeting of the International Botanical Nomenclature Committee during the 13th Botanical Congress.

Anyway it's official, we are now back to *iana*. Thus *Paphiopedilum spicerianum* and *Euanthe sanderiana*.

As John Woodward expressed it in the Tasmanian OS Newsletter: "I expect there are a lot of lucky people who never made the change to their labels — those that did might like to hold off in case we change back again."

BOOK REVIEWS

Laeliinae Intergenerics

W.W. Goodale Moir and May A. Moir

After attempting 36,000 crosses, raising 2,000 of them, and registering about 850 orchid hybrids, Mr. Goodale Moir has built up a wondrous amount of knowledge on orchid breeding.

Happily he has set out, ably assisted by his wife May, to pass on his vast experience. Two previous books on hybridising reveal not only the depth of his experience but also his careful observation of natural environments. Witness this quotation from Appendix IV written by his wife: "These trips to tropical countries led him to see another side of the evolution that no one ever mentioned: the hybridisation that took place between the variants of a species growing in various environments".

The two previous books have become recognised as essential tools for the hybridiser. This one is destined to be the same.

After a short but vital preface the first chapter describes the breeding affinities and potential of the species within the Laeliinae sub-tribe. Chapter two is on two-genera crosses, then successive chapters on three, four, and five genera crosses.

Chapter six is a wonderful exposition on variants which is amplified in Appendix IV.

Appendix I is a chronological list of registered Laeliinae intergenerics. Appendix II is an alphabetical list on genera, intergenerics, and abbreviations. Appendix III lists recommended breeding plants. How much time and money could that save a hybridiser?

Breeders should rush to obtain a copy of this book. Growers should read it for its Appendix IV, and as a guide to buying. You can drool over the colour illustrations.

Laeliinae Intergenerics, W.W. Goodale Moir and May A. Moir. Obtainable from University of Hawaii Press, 2840 Kolowalu Street, Honolulu, Hawaii, 96822, USA. Paperback. Price $12.00. Add $1.50 for postage.

Recommended at same price: *Creating Oncidiinae Intergenerics*, and *Breeding Variegata Oncidiums*.

Growing Orchids in Australia and NZ

Gordon C. Morrison

Mr. Morrison is a hobby grower of orchids as well as being a horticultural research officer. He thus has a unique combination of experience. Further he is able to pass on his knowledge in easy, understandable prose. This is a book which will have a ready place on the market. In compact form it represents data of value to both novice and advanced growers.

It covers biology, diversity, and ecology of orchids, and their influence on culture. There are valuable sections on purchasing and housing, and all aspects of propagation.

Glasshouse management, importing, taxonomy and nomenclature, electronic glasshouse control, are all discussed in sufficient detail to remove the mystery.

There are useful appendices, a glossary, and index.

Growing Orchids in Australia and New Zealand. Gordon C. Morrison. Published by Kangaroo Press, 2 Whitehall Road, Kenthurst, NSW. 2154 Australia. Price $8.95 at booksellers, or from the publishers, plus $1.50 post and packing.

Cymbidiums from flask without loss

R. A. FARQUHAR

I have been growing cymbidiums for about fifteen years in a limited way for the sheer pleasure of it.

I live in the Mt Lofty Ranges at Nairne, twenty miles from Adelaide and 300 metres above sea level. We had a long wet winter in 1981 and this year, 1982, we are having a hot summer. In fact early in January the temperature hovered around 38° C to 44° C for seven consecutive days. There has been no rain this summer.

The River Murray is our main source of water. It is chlorinated and salty. This does not seem to affect the older plants provided it is applied in large as possible drops. Too fine a mist will deposit more salt than the heavier drops because of the excess evaporation.

I began growing cymbidiums from flasks and while I had some success I lost a few plants from each flask, or else they did not grow to a noticeable degree. Only a few from each flask grew reasonably well when using accepted composts.

None of my experiments with different mixes gave the results I wanted until one day, being a builder, I found myself with some leftover marble chips, approximately 1mm to 3mm grit, and I decided to try these as an experiment. This was over two years ago.

The plant used was a seedling. It was watered regularly and fertilizer applied in the water at intervals. This plant grew well, but the interesting results were the roots which were crystal white, with no loss or browning. I then decided that I would use marble chips for all seedlings and meristems from flasks in 1981. I set about planting them out into community pots.

After filling the pots, each 20 cm x 15 cm, with marble chips which had been washed free of dust and powder particles, the pot and chips were immersed in boiling water for ten minutes and then allowed to cool.

Then it was so easy to plant the seedlings by removing half the chips, setting the plants, and pouring the chips around the roots. Before planting the plants were washed free of agar.

The pots were then watered with weak fertilizer containing all the required nutrients, but with a high nitrogen content.

Plants were then placed under a plastic tent with Gro-Lux lights about 35 cm above the leaves. Lights were switched on for twelve hours each day during the winter. Some bottom heat was also applied.

We had many frosts late winter to early spring and when these were over the plants were all taken out to a shadehouse using two layers of 50% shadecloth, one approximately 15 cm above the other. The lower one is movable so that when the sun loses its mid-day heat the cloth can be pushed aside to admit as much light as possible during Spring and Autumn.

This method gives approximately 80% shade in the hottest part of the year. The plants were fed a weak solution of fertilizer in every watering, twice a week in winter and every day in Spring, Summer, and Autumn. Make sure some runs from the weep holes each time you water, and do not forget to flush them with clean water minus fertilizer, occasionally. I used rain water for my seedlings. On hot summer days I sprinkled water over the plants morning and evening and sometimes more often.

If this is done then the marble chips with their surface covered with a film of moisture create the necessary humidity around the roots and to the leaves.

Marble chip compost lets the air circulate around

Editor's note. Mr. Farquhar sent some very interesting photos with his article. They show the excellent root and leaf growth of his plants. Unfortunately colour prints are rarely sharp enough for reproduction. Transparencies in sharp focus are in order for colour. For black and white reproduction sharp, high contrast, prints are necessary.

One photo shows a black plastic pot 20 cm wide with leaves of ten plants overflowing it. These were mericlones of C. Highland Mist 'Caroline' which had been deflasked 3rd July, 1981. Plants were to stopper height when received. Measurements taken at 12th February, 1982, showed plants from the compot as having a length over all roots and leaves of 40 cm, the leaves reaching 30 cm.

Plants of Alvin Bryant cross no. 8005 were approximately 5 cm high on deflasking on the 3rd July, 1981. Measurements taken 12th February, 1982, show a length of roots and leaves of 25 cm, and leaf lengths of 18 cm.

Mr. Farquhar sent two same size photostats of plants to verify the above measurements.

Mr. Farquhar sums up his successful experiment succinctly "No magic compost. No magic fertilizer. A simple system for those who have been discouraged by deflasking losses and who wish to try again."

A.O.R. will welcome reports on results from those who try this technique.

the root system to an extent not possible with other composts.

With marble chips the original roots just continue to grow. Of the 400 plants out of flask in 1981 not one plant has died. One hundred of these have now been repotted into a mix of 50% marble chips and 50% pinus bark, the latter graded 10 to 12 mm. On top of this compost nine month Osmocote has been sprinkled.

Each one of these plants had crystal clear roots and no sign of dead or brown ones.

Repotting from the original compots was also easy. You just take hold of the leaves, pull lightly and wriggle the plants. It comes out cleanly, without disturbing such plants you may wish to leave a little longer.

Even the knobby pieces of plant tissue always found in any flask do well in this compost although they are slow in making leaves.

The cost of a bag of marble chips at this time is $4.00 for 60 kg. This is cheap when one considers the advantages from using it and the fact that it can be used over and over forever with only minor washes and sterilising. The chips do not float about, they do not rot, they do not harbour insects.

With the root system my plants have at present they should develop very quickly given reasonable attention.

Incidentally, the 50% pine bark used in the repotting mix was in order to reduce weight. It is readily available in South Australia. Styrene could be used in place of the bark.

I would be pleased to answer any queries you might have.

P.O. Box 1, Nairne, S.A. 5252.

CHEAP HEATING

Writing in the Warringal OS Bulletin, Mr Maurie Black has this to say regarding a piece of advanced American technology:

"Do you ever get the idea that you would like to grow exotic orchids, but get scared off by the heating costs? A report in the press seems to offer a solution.

"This character in Oregon has heating costs of $18,800 per year, and by installing 450 rabbits in his growing houses, he cuts costs by 12 per cent. You see rabbits are very hot animals and pretty hot stuff in other directions too. The ears act as radiators, and by setting up fans to blow across bunny's ears he has worked out that 450 bunnies put out 180,000 BTU's. In his case, 4,500 rabbits would supply all his requirements in heat, and end up with a profit from the sale of the 'natural increase'. This profit could be diverted to buying the block next door and planting cabbages, 'cause otherwise the heating source would fold up from the lack of fuel, which is where we started from in the first place."

AOR adds that anyway any saving made this way would only go to the tax man. It is suspected too that the American reporter was a guy named Joe King.

BOOK REVIEWS

Proceedings of the Tenth WOC 1981

This is a great orchid book.

It sets a record in production speed in that it first became available less than a year after the Conference it records so well.

Speedy production has not been at the expense of quality. The editors, Joyce Stewart and C.N. (Klasie) van der Merve, are to be congratulated on a superb publication. Print quality is excellent and the typography makes for easy reading. The nomenclature is accurate.

The early plates show the winners in each class, starting with a full page frontispiece of the grand champion, *Cymbidium* Highland Mist 'Dillabirra'.

The early text records the organisation and personalities involved, also the names of winners in each show class.

Most aspects of orchidology are covered in the lectures and it is this which gives the book its lasting value, historically and as a reference work.

At the conference most of the lectures were illustrated by slides and therefore the editors had a big task in narrowing down the most appropriate ones to reproduce. All those used are perfect and, more importantly, apt. There are 36 plates, most of them with six to eight illustrations.

Names of lecturers, of course, reads like a "Who's Who" in orchidology.

These *Proceedings* are an essential record for those who attended the Conference. For those who could not attend they are an essential way of keeping up with the latest developments.

Copies may be obtained from the South African Orchid Council, PO Box 2678, Johannesburg, 2000, South Africa. Cost, including postage is R50.00 (about $50.00 Aust.).

The Cymbidium List Vol. II

Arthur R. Koester

This is another essential book for hybridisers, and from all who buy seedlings from them.

It complements Sanders by detailing the awarded plants in each grex. The cultivar epithet is given, the award, and the awarding authority.

Volume I covered the period 1799-1976 in 192 pages and is still available at US$9.95, plus $1.00 surface mail, or $7.00 airmail.

Volume II covers 1977-1980 (64 pages) and lists a new species, over 420 new grex names. It names 400 cultivars with more than 510 awards from all Australian, English and American authorities, also New Zealand, Japan, and South Africa.

A section details Japanese and South African awards granted prior to 1977 as these did not appear in Volume I. Minicyms are coded, and there is a list of cultural awards.

Nomenclature conforms to the rules given in the IOC *Handbook on Orchid Nomenclature.*

Vol. II is priced at $5.95, plus $1.00 surface mail, or $4.00 airmail. Obtainable from the publisher Arthur R. Koester Books, PO Box 344, Burbank, California, 91503-0344, USA.

CERATOBIUM DENDROBIUMS

MARJ PURNELL

The 1983 Eighth Australian Orchid Council Conference in Townsville will attract many visitors from overseas and southern States, and being held in early spring, ceratobium dendrobiums and their hybrids should be blooming.

While this may be no novelty to northern growers, to many others it may be their first introduction to the fascinating and colourful "antelopes" that thrive in the warmth of Queensland but require considerably more care and attention in colder climates.

Heat and humidity being their main requirements, ceratobiums have, in the past, provided somewhat of a challenge to growers in colder areas, especially when one considers that until recently, this section of the dendrobium genus has had little published advice as to its cultural requirements.

Detailed information on their natural habitats and growth patterns is scarce. Most importantly, the very little available in descriptions of species, and their flowers as a guide to identification, has been sketchy, variable and often confused.

This has been brought about, often as the result of descriptions of variations of a species being recorded by early collectors, especially in New Guinea and the adjacent islands, and these variations being named as a separate species.

Later classification has been corrected, and the plant renamed.

I feel it may be quite some time before the world has an accurate record of ceratobium species, and a clear description of their natural habitat, growth habit, structure, foliage and most essential, their individual flowers.

Colour photos are most important in the identification of species ceratobiums as many are quite varied in shape, size, colour and number of flowers to a spike, even if they are of the same species; variations are quite often markedly different, in collections made over a scattered area.

In the past some of these variations have been separately named, then later identified as an identical species and all the original names changed again.

In more recent times, it seems to me at least, that quite a lot of variants or supposed variants have been lumped together as one species, despite obvious differences in structure, size and colour of blooms.

The confusion over the classification of *D. lineale* and *D. gouldii* (*inthurmii*, 'Bougainville white', etc), also the D. 'Pomio Brown' and 'Talasea' forms, and 'Mushroom pink' variety are examples.

I am not a botanist, nor am I so presumptuous as to consider that my identification of species ceratobium collected in field trips in Papua New Guinea is correct.

However, I believe Dr Phillip Cribb of the Royal Botanic Gardens in Kew is to be a guest speaker at the 8th Australian Orchid Council Conference in Townsville, and it will be most interesting to hear his talk, hopefully on the classification and research on ceratobiums, resulting from his field trip, collecting and identifying specimens in the Pacific Islands and Papua New Guinea in 1980.

Hopefully, the findings of this latest research will pave the way towards the production of a book on the history of naming ceratobiums species from the tropics, their present (and past) classification, plus accurate, detailed descriptions of each species.

Perhaps (and one must be optimistic), colour photos of the blooms instead of black and white, could be used to illustrate the "type" flower, and include its variations.

The rather sad aspect of breeding ceratobiums is the enormous confusion already present, due to incorrect nomenclature.

Registrations of hybrids have been almost impossible due to this, and I refer to those in only recent years.

D. tangerinum (as *streblosceros*) caused upheavals and corrections in primary hybrids alone; *D. lineale* and *D. gouldii* crosses are still in a mess, and I can see trouble ahead with *D. helix* and its possible variants.

I myself, have always regarded the dark brown, flushed yellow-green form with crispy, curled, dark-chocolate horns and deep-lilac, shaded labellum with its tendency to lean forward, to be the "type" form of *D. helix*.

This form, with its somewhat smaller and sometimes paler variations, is apparently to be joined by the 'Talasea' species which include pale mauve, yellow with violet lip and variations between, plus the 'mushroom pink' form from Cape Gloucester, all classed as *D. helix*.

Unless the work on classification is finalised before too long, the breeding of ceratobiums, which is currently enjoying a terrific rise in popularity, is going to further compound the problem.

The mind boggles at the thought of all those breeders hastening to register past crosses previously in doubt as to the names of parent

species, and then going on to register crosses of those older hybrids.

In future, breeders will be producing a somewhat hilarious array of hybrids, should they attempt to repeat a popular previous cross done by someone else, hoping to produce similar flowers.

Using parents which they regard as the original named clones, and not knowing which of the umpteen variants of one species was really used, I can see some very disappointed breeders — and customers.

Still, it may be interesting . . .

The more desirable species would include *D. lineale, D. tangerinum, D. helix, D. taurinum, D. lasianthera, D. robustum, D. nindii* and *D. discolor.*

These have already been used extensively to produce some lovely hybrids with very desirable characteristics depending on the parents; these include hardiness, free-flowering qualities, shorter stature and robust growth, long-lasting and floriferous qualities and some very showy colour combinations.

They have adapted to quite a wide variation of conditions and temperatures, and by using the smaller-statured species, produced some good shorter-caned specimens which are easier to handle bench-wise.

Hopefully, the weather next spring will be kind and the best of our ceratobes in bloom, and we in the north can put on a brave show to demonstrate to the visitors at the Eighth Australian Orchid Council Conference just what has already been done in breeding ceratobiums without losing their long-lasting flowering abilities.

This is one of the most desirable of any orchid quality; to be able to produce spikes of flowers that last for up to three months on the plant; a feat not all orchids can achieve.

It is to be hoped that there will be flowering specimens of species ceratobiums on display too, at the conference, to show how some of their crosses have produced better and more colourful blooms. Hybrids very often will adapt and thrive far better than species, and by using our local *D. discolor,* the resulting crosses between it and more showy species, grow and bloom much better in areas where *D. discolor* is in its natural habitat.

Again, far too many growers, breeders and judges have never actually seen some of the species.

They often see hybrids of them and have come to appreciate these lovely flowers, but have no real knowledge of what the species parents looked like.

While this is not very important to the grower who simply likes these hybrids and their flowers, I feel it is most important to those who judge orchids by the standards set up in judging rules.

Some species, but more importantly their hybrids, especially primary and secondary hybrids, have little hope of conforming to those standards i.e. the expected number, size and colour of flowers, too often unrealistic when taking into account the maximum number of flowers (and points) that can be expected in hybrids of parents which both do not produce long spikes bearing numerous flowers.

Many species ceratobiums will produce much less than twenty (20) flowers per spike and unless judges have a thorough knowledge of the flowering potential of species, and of the breeding of their hybrids, they may, and too often have, down-graded species and hybrids unwittingly, due to lack of that knowledge.

It is unrealistic to expect plants to produce the impossible; like breeding mice and expecting to produce rats . . .

A very good reason why an easily-read, easily-identified, descriptive book, complete with colour photos is long overdue, as access to botanical research literature is not easily available to the "man-in-the-street".

Fortunately ceratobium dendrobiums are proving easier to cultivate these days, once their cultural requirements are understood, as it is with any orchid, really.

They are adaptable, hardy and showy and a specimen plant in full flower has an impact that few people forget.

The "antelopes" can grace any show bench, and often fascinate people who are unfamiliar with them, so here's hoping we can put on a magnificent display at the Eighth Australian Orchid Council Conference in Townsville, and may the weather be kind so our ceratobiums can be at their best, to win some more fans and justify my obsession with them.

6 Holmes Drive, Beaconsfield
North Mackay, Queensland 4740

GOLDEN COAST ORCHID SOCIETY

Yes, the EN is correct. No connection, other than a love of orchids, with Queensland's Gold Coast OS. The Golden Coast OS meets at Waikanae, New Zealand. They sent AOR one of their monthly bulletins which arrived just too late for mention in the last issue. The bulletin indicates they are a very active and progressive bunch of orchid growers at Waikanae and places around. It is certain they would welcome any chance Aussie dropping in. The bulletin reveals that they meet second Monday of the month at St Luke's Hall, Waikanae, at 7.30 pm.

Secretary is Mrs B. Norman, 60 The Esplanade, Raumati South, phone PRM 86959.

Waikanae, incidentally, is Maori for "water mullet" and arises from a legend in which "mullet glisten in the water".

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Schlechter's New Guinea Work and Australian Orchidology

Dr. P.S. LAVARACK

National Parks and Wildlife Service, Townsville

Interest in the wonderful orchids of PNG and their Australian counterparts is widespread among growers world-wide. As Australians we have a special interest in furthering their horticultural development, and there is no doubt that publication in English of Schlechter's great work on the orchids of the region will ensure a greater understanding of them. Printing is now almost complete and the work will be available through the Australian Orchid Foundation early in 1983.

The orchids of Australia are now reasonably well known, although new discoveries are being made in North Queensland and the Northern Territory from time to time. It is now possible to state with reasonable confidence that there are some 93 or 94 genera and between 550 and 600 species in Australia, but this kind of statement cannot be made for New Guinea. Estimates of the number of species there range from 2,000 to 4,000. It is likely that many species await formal scientific description but it is also probable that a significant number of existing names will one day be shown to be synonyms of earlier names. In short, orchid taxonomy is in its infancy in New Guinea. Indeed were it not for two men — J.J. Smith and F.R.R. Schlechter it would never have been born.

Without doubt the best known work on New Guinea orchids is that of Friedrich Richard Rudolf Schlechter — *Die Orchidaceen von Deutsch Neu-Guinea*. This massive work and its significance to orchidology in Australia will be considered.

Schlechter worked in what was then German New Guinea in 1901-1902 and again in 1906-1909. While most of his time was occupied with economic plants, he was able to devote considerable effort to a collection of orchids. Many of these he illustrated in a series of field sketches later published as the *Figuren-Atlas zu den Orchidaceen von Deutsch — Neu-Guinea*. On returning to Germany, Schlechter worked on his collections, as well as on those of others, culminating in the publication of his work in Fedde's *Repertorium Specierum Novarum Regni Vegetabilis* between 1911 and 1914. In what can only be described as a monumental work, Schlechter described 1,102 new species, several new varieties, many new combinations and 16 new genera. Schlechter's own words indicate the importance of this work:

"Ninety species had been listed for the German Territory when I first visited it in 1901-1902, these were reduced subsequently to 75. Since I had been interested particularly in orchids, they naturally claimed my special attention and I soon saw that the proportion based on the above number was far too low, especially in the forests of the higher mountains where new forms revealed themselves almost at every step. The Bismarck Range, which I successfully penetrated in 1902, proved strikingly rich. I reached New Guinea in October 1901 and left again in 1902. In spite of this short stay, I found, on resuming my work in Europe, that I was able to determine 230 new species. Whereas formerly 32 genera had been represented, this number was increased to 56, of which nine were previously unknown to science. It was only natural that, with these results I desired again to visit this country of which only infinitely small parts had become known. I, therefore, gladly availed myself of an opportunity to undertake a second journey to German New Guinea in connection with agricultural problems. This visit lasted about three years.

The orchidological results are presented in this book, in which the previous findings also receive consideration, and I believe I may say without exaggeration, that they have surpassed my utmost sanguine expectations. I have been able to record no less than 116 genera and 1450 [1463] species, 1102 of the latter being new. There is, consequently, in New Guinea a fabulous wealth in orchids, which is not even approximately reached in any of the neighbouring regions of similar latitude, nor indeed in any other country or island complex of similar size in the world."

There is no doubt that the floras of New Guinea and Northern Australia are closely linked. Indeed, it would be surprising if this were not so, as the relatively narrow Torres Strait has, not infrequently, been dry land during past periods of lower sea level. Northern Australia shares more than 40 per cent of its orchid species with New Guinea, while the figure for Cape York Peninsula and New Guinea rises to 50 per cent. For this reason, if for no other, Schlechter's work is important in Australia. Eleven species of orchid which occur in Australia are described in detail, while another 26 are discussed briefly along with notes on their relationships and distribution. Thirty-eight Australian species are illustrated in the *Atlas*. Whenever a "new" species is discovered in Northern Australia, it is always to "Schlechter" that the botanists first turn. The drawings, while not of the highest standard, are adequate and aid in identification, while the Latin descriptions are clear and concise. Thus *Die Orchidaceen von Deutsch — Neu-Guinea* has long been an invaluable tool to the botanist or interested amateur working on Australian tropical orchids.

The usefulness of the work in Australia does not end simply with identification of new species. Another aspect which is of interest is Schlechter's treatment of the sections of the larger genera such as *Bulbophyllum*, *Dendrobium* and *Malaxis*. In many cases Schlechter's is the most recent such treatment available and has been the basis for subsequent works such as Dockrill's *Australian Indigenous Orchids*. Other matters of interest abound in the introductory paragraphs which precede the detailed treatment of each genus or section. In these paragraphs Schlechter makes numerous observations of taxonomic importance, occasionally affecting Australian species with which he was evidently quite familiar.

Being written in German, most of Schlechter's writing has been locked away from the average orchid enthusiast and to a lesser degree from English — speaking botanists in Australia. Australian botanists have, where necessary,

translated bits of particular interest to their current research and, as the descriptions are all in Latin, there has been little need for large scale translation — or at least so it seemed. However, in so doing a vast store of botanical fact and taxonomic reasoning has often been overlooked.

Schlechter was a rarity among taxonomists. He was equally proficient in the field or the herbarium and had first had field knowledge of most of the plants he described. This hard-won experience was the result of tireless effort on five continents and it is this experience which gives his opinions such authority. Thus the value of his work lies equally in the general text and in the taxonomic descriptions. On certain issues modern botanists may well choose to disagree with Schlechter, but they certainly cannot afford to ignore him.

Finally there is the introduction to the book which covers a multitude of different aspects of the orchids such as: history, climate, distribution, plant geography, biology and classification. This chapter places the orchids of New Guinea in the world scene and concludes with Schlechter's ideas on a classification of the orchids. Later Schlechter was to provide one of the great systems for the classification of orchids and it is interesting to see here the beginnings of his ideas.

Die Orchidaceen von Deutsch — Neu-Guinea is clearly a book of significance to New Guinea, Australia and the world. Australians who, by and large, are not noted linguists should welcome the new English translation sponsored by the Australian Orchid Foundation. It opens a whole new treasure house of orchid botany and, even for those armchair enthusiasts who have no intention of roaming the mist-shrouded ridges of the Finisterre Ranges, it is an interesting, relevant and readable book, which causes one to wonder at the industry of its author.

ORDER YOUR SCHLECHTER NOW!

The printing of the English version of Schlechter's great work on New Guinea orchids is almost complete.

Copies may be ordered from the Australian Orchid Foundation now at $150.00 each including postage. Forward order with your cheque or bank draft to Australian Orchid Foundation, 87 Roberts Street, Essendon, Victoria, Australia 3040.

CAPSULATED CAT CULTURE

The cattleya is probably the most appealling and certainly the most popular orchid cultivated throughout the world. The cattleya alliance covers a huge range of colour, size, number and shape of flowers to suit conditions ranging from temperate to tropical. The best time to repot is when the *new* growth produces a cluster of new roots, irrespective of whether the plant is in sheath or in flower at the time. Use coarse compatible compost as all the alliance are tree dwellers with exposed roots in nature. Don't bury the rhizome as this can cause loss of growth eyes with no backcut propagations. Don't overpot *any* epiphyte and always stake the plant firmly to avoid root damage. When buying stock plants check old growths for past flower production as there are many non flowering varieties disposed of for this reason.

Jim Cummings in *North Shore Orchid Bulletin.*

Australian Species described or illustrated in Die Orchidaceen von Deutsch — Neu-Guinea

Species	Described in detail	Mentioned	Illustrated
Peristylus papuana		X	X
Epipogium nutans		X	X
Nervilia aragoana		X	X
Goodyera rubicunda	X		X
Corymborkis veratrifolia		X	X
Tainia parviflora	X		X
Malaxis latifolia		X	X
Malaxis xanthochila		X	X
Liparis confusa (= *L. condylobulbon*)		X	X
Calanthe triplicata		X	X
Eulophia emarginata (= *E. pulchra*)		X	X
Eulophia venosa		X	X
Geodorum pictum (*G. densiflorum*)		X	X
Cadetia wariana	X		X
Diplocaulobium glabrum		X	X
Dendrobium bifalce		X	X
Dendrobium johnsoniae		X	X
Dendrobium hollrungii (= *D. smillieae*)		X	X
Dendrobium antennatum		X	X
Dendrobium mirbelianum		X	X
Dendrobium ionoglossum (= *D. nindii*)	X		X
Dendrobium insigne		X	X
Dendrobium thysanochilum (= *Flickingeria comata*)	X		X
Eria dischorensis	X		X
Bulbophyllum masdevalliaceum		X	X
Bulbophyllum purpurascens (= *B. macphersonii*)		X	X
Acriopsis nelsoniana		X	X
Pholidotia imbricata (= *P. pallida*)		X	X
Sarcochilus moorei		X	X
Phalaenopsis amabilis var. *papuana*	X		X
Vanda hindsii		X	X
Schoenorchis densiflora	X		X
Schoenorchis sarcophylla	X		X
Pomatocalpa marsupiale		X	X
Taeniophyllum malianum	X		X

The search for *Cryptanthemis slateri* Rupp

RONALD KERR

Following announcement by the Australian Orchid Foundation of a $200 reward for finding *Cryptanthemis slateri*, published in the June, 1981 issue of this magazine, it came as a surprise to find an excellent illustration of its flowering capitulum in Dr. Robert Dressler's *The Orchids: Natural History and Classification.*

Mr. Don Blaxell of Sydney Herbarium was able to find out from Dr. Dressler that the transparency had been sent to the Smithsonian Tropical Research Institute at Panama by Mr. John Green of Casino, NSW.

En route to Brisbane for the Seventh Australian Orchid Conference I took the opportunity of calling on Mr. Green in order to learn more about the finding of this mysterious underground orchid on Lamington Plateau.

Mr. Green is a retired solicitor who some years ago contributed several interesting articles on the native orchids of the Macpherson Ranges to this publication.

To meet and speak with him is to sense at once his keen interest in nature and his love of the Australian bush.

Details of the Mallawa finding as published in the June, 1981, issue were scanty, and as I found out from Mr. Green, not very accurate.

Mr. G. Kouskos, who is credited with finding this orchid, was foreman of a work gang sent to repair a path in the Lamington National Park which had been damaged by a subsidence. The orchid was uncovered by the soil collapse and Mr. Kouskos thought it might be a rather curious piece of fungus.

By co-incidence Mr. Green happened to be near and was asked for an opinion. He recognised it at once as *Cryptanthemis slateri* and promptly took photos. One of these, a side view of the capitulum or flower head, was sent to the Queensland Herbarium, and a duplicate from it was used to illustrate the June 1981 cover. Another which showed a more detailed view of the capitulum was sent to the Smithsonian Institute.

Chance Discoveries

How many times must *Cryptanthemis slateri* been found and discarded as being an odd hunk of fungi?

The first discovery by Mr. E.W. Slater at Bulahdelah in 1931 was accidental. He sent it as a curiosity to Mr. Fieldsend of Maitland. The latter recognised its orchidaceous features and sent it to the Rev. H.M.R. Rupp, famous authority on the orchids of NSW.

Dr. H.L. Kesteven of Bullahdelah found more plants at the same spot in 1932. In October a year later Rev. Rupp and Dr. Kesteven found more plants and took photos.

Finds of single plants were made at Springwood on the Blue Mountains early in 1974, and at Wentworth Falls in March 1975. This area is dry sclerophyll forest.

Mr. Green's discovery was made late September or early October. The Mallawa locality is on the eastern side of the Lamington Plateau where the annual rainfall exceeds 2000mm. It is wet sclerophyll forest. The plant was white when dug up but gradually turned brown on exposure.

There is considerable variation between jthe three areas where discoveries have been made, in latitude, altitude, rainfall, and flowering time. The potential is there to find it anywhere between the Blue Mountains and southern Queensland, at near sea level to 1000m, and in flower between September and March.

One of the Blue Mountains finds was made during excavations for a garage. Thus there is every chance of further accidental discoveries. Should you make one, or learn of one, please phone the Sydney Herbarium (reverse charges), and ask for Mr. Don Blaxell, or if absent the duty officer. The number is (02) 27-4347. It's worth $200 if you do.

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Nutrition research support

In the June issue A.O.R. published on page 109, Mr. Bill Johnson's offer to provide details of nutritional experiments in return for a small donation to the Australian Orchid Foundation.

Mr. Johnson's letter printed below shows that interest in orchid nutrition is very high. It also indicates overwhelming support for the A.O.F. Many good folk donated more than the modest price of three stamps. Mr. Johnson and the members of the Mornington Peninsula O.S. are to be congratulated for their support of the A.O.F.

Thank you donors. The amount raised by this worthy effort is invested by the A.O.F. and the interest thereon devoted to further research.

These ten foolscap pages on nutrition are still available from Bill Johnson. Send three stamps of 27¢ value plus 225 x 100mm S.A.E. to him at the address below. Profit over print cost goes to the A.O.F. Donations in excess of this value will be most welcome. Overseas folk should send an International Money Order or bank cheque.

Bulk orders may be obtained though the Mornington Peninsula O.S., c/- secretary Mr. Les Smith, 13 Glamis Avenue, Hampton, Vic. 3188.

Lot 18 Dandenong-Hastings Road,
Cranbourne South, Victoria 3977
October 14, 1982

The Editor,

A quick note to let you know that we shall be handing over the first $500.00 to Gerald McCraith for the A.O.F. as the proceeds from the sale of the "Nutritional Program" on October 21st next at the M.P.O.S. meeting.

I say the "first" $500.00 because that represents the cheques etc. cleared to date, and we have close to a further $200.00 being cleared as well, and the inquiries are still coming in. We had to do a second printing, and if the inquiries continue to come in a third is not far away. As long as it is wanted we will print it.

The number of people, including many from New Zealand, have given donations up to $10.00 and those people all deserve our thanks. When one sees the results of research that is coming in, such as the recent paper from Dr. Noel Grundon, at the Brisbane Conference, and the earlier one from Nicholls, orchid growers generally can only benefit from more research that will come from this small effort.

My effort was rather insignificant but for it to gather such generous support, I think, is indicative of what the orchid growing community is capable of. Could you please convey my appreciation to those readers who have supported the effort so far, and to yourself and A.O.R. for backing it. No doubt Gerald McCraith will add something later (I know he is delighted).

A number of people who bought the paper have written to me indicating that they too are getting good results from my suggestions so I too am delighted.

Bill Johnson

TASMANIA IN THE 80's

CHRIS NICHOLAS

In the June A.O.R. your Editor gave an insight into orchid activity in Tasmania. It's even more exciting than he let on.

With the advent of the new Scottsdale Orchid Society, Tasmania now has five up and coming orchid groups, two in the North of the State, two along the North West Coast and the original Tasmanian Orchid Society in Hobart.

Not only that but we also have three orchid nurseries in the South as well as a general nurseryman specialising in orchids at Bicheno, a lovely East Coast beach resort. Orchid nurseries were something we lacked for many years and the establishment of these has been a big step forward.

All well known genera are available plus quite a few of the miscellaneous which, I'm pleased to see, are again becoming very popular. And, of course, everyone knows the best sphagnum moss available comes from Tasmania.

Our bi-ennial Tasmanian Orchid Conferences, commenced as a lead up to the 6th World Orchid Conference got all intrastate Societies thinking on the same wave length and the co-operation and togetherness achieved was particularly noticeable when Tasmania hosted the 6th Australian Orchid Conference in 1979. It is essential that we, and in fact all orchid groups, work in unison to further orchid growing throughout Australia.

Another major step has been the commencement of judging training for all affiliated Societies. Sounds simple but think of the trainees who spend nine hours travelling from Burnie and Devonport to Hobart and return for each day's tuition. They are bound to succeed.

For all interstate growers who are coming to Tasmania for a holiday, and we would love to meet you all in person, we have a new venue for our meetings. If you are in Hobart on the fourth Monday in the month join us at Legacy House, 159 Macquarie Street at 7.45 p.m. This is centrally situated, just two blocks from the GPO. Otherwise phone Jim Smith on 44 1555 or Phyl Nicholas — 28 4478, you'll be more than welcome.

Mackay Silver Jubilee

Congratulations to the Mackay and District Orchid Society on the occasion of their 25th Anniversary year. They celebrated the occasion with a weekend conference and show. Dr Andree Millar, OBE was a special guest and speaker. Her address stressed conservation and was interspersed with amusing anecdotes told in Andree's inimitable style.

Many growers from other societies attended a wonderful weekend.

WATERING ORCHIDS Part 2

W. R. "Bill" JOHNSON

In the June 1982 issue of AOR I dealt with the general aspects of watering orchids. Now I would like to advance to some of the more technical functions of water and its relationship to plant growth and at the same time discuss one or two other matters that are not entirely unrelated to water.

During the past decade scientists and plant physiologists have been slowly unravelling the methods by which plants collect energy from sunlight and then convert that energy into food and store it. Prior to that the knowledge which had so far been gained explained the end product but not the means by which it occurred.

It was once thought that CO_2 was the basis for photosynthesis but that has been proved incorrect. It is now known that for plants to synthesise carbohydrates, light energy is not required for the reasons once thought. (1) Instead, the process is much more complicated. It is based on the light energy being captured by the cell pigments (cytochromes and chlorophyll) and the extraction of an electron from water.

All plant cells begin life in the dark, or near dark. A seed that is covered with soil or compost does not receive light energy until its leaves have reached upwards from the soil and into sunlight, and yet it produces the energy to grow.

Before the first particles of light energy can be captured by a plant's cell pigments, they must contain electrons. The seed's cells must contain some electrons, but no doubt more are extracted by the embryo plant from water before it reaches sunlight. On reaching sunlight the plant's cell pigments receive the light energy which ejects an electron from the pigments. The ejected electrons are passed along by electron carriers into the plant's energy production and energy storage system.

For each electron ejected from the cell pigments another has to be captured and the deficiency made good. The cycle is quite complicated and highly efficient. For plants to perform this cycle they must possess roots which are very healthy, have access to correct nutrition, and be able to accept the light energy falling on the leaves.

From whichever aspect the plant's energy system or its state of health is viewed it comes back to water!

If we review the factors involved we will note the following—

Water must be transported to the plant's root system. The plant's system must be in perfect health so the plant can split the water molecule and from it extract electrons. The water must carry nutrition and the electrons to the energy-collecting system, which in turn receives more light energy which moves more electrons to where the cells will produce phosphate complexes and carbohydrates.

In the cycle a number of chemical elements will be used by the cells, namely: iron (to produce the iron-based protein, ferrodoxin), magnesium (to produce chlorophyll and chloroplasts which are cell pigments), chlorine and manganese, as well as carbon, nitrogen, oxygen and hydrogen. The latter two are obtained from water.

By now the pennies should be dropping! If we have a deficiency of iron (Fe) and magnesium (Mg) a plant cannot produce the proteins and cell pigments to trap the light energy. If there is sufficient of these elements available in the compost, but the root system is unable to transport adequate water and chemical elements to the plant's cells, the whole system collapses.

But it all comes down to **WATER,** doesn't it? Water, and a compost which can handle the application of water at any time of the year no matter what the weather conditions.

If we create a healthy set of roots for any orchid the bulbs and leaves will be provided automatically. Healthy roots are provided by a healthy compost. One which is open and breathes, one which will allow regular flushing without retaining excess water, and one which will allow regular watering even in the coldest months of the year. Any compost must be designed for the **COLDEST** months of the year — not the hottest! Most of all it must be designed to provide roots which are in a perfect state of health.

Some aspects of this article may be regarded as controversial. However it is guaranteed to provoke those grey cells. Watering is closely associated with the problems of nutrition. The two factors combine to make the most important factors in culture. If your experience confirms or contradicts the propositions herein write and tell AOR about it. There are still many unknowns in orchid metabolism. Your experience may help unravel some of them.

What intelligent life forms orchids must have been many years ago to learn to exist on trees and on rocks! Even in a deluge their roots would be wet only for a short time before drying out again!

I am just beginning to realise how important correct watering is to orchids because of what the past few years of study have shown.

During the last two years of our nutrition studies a problem occurred with certain plants (not in the test batch), on the arrival of the cooler weather, and shorter sunlight hours. The leaves of the backbulbs would for no specific reason suddenly turn yellow and drop off. At first this was attributed to the normal behaviour of cymbidium orchids converting their green bulbs to "backbulbs", but some of the plants were shedding leaves too close to the new leads to be safe.

At first the mixture was suspected, for it was, in some of the examples a little on the wet side, and so some plants were repotted into a more open mix. At first that did cure the leaf drop in some of the plants but later on the same syndrome appeared in pots containing fresh mix.

The next conclusion reached was that it was the fertiliser balance, because plants can transport certain of the major elements from the older sections to the new growth areas to provide food to support the new growths. Could this indicate one or perhaps more of the nutritional elements was deficient? To test that theory P (Phosphate) and, K (Potassium) were increased singly and collectively. For a time it looked as if that treatment would provide the answer — but no, it didn't!

The matter was left without a solution being found before the return of the 1981/82 summer. That meant the problem would not occur until the onset of winter 1982. During that respite the problem was mentally reviewed over and over again checking off the likely causes and the likely answers. Then I remembered an old rule I was taught on investigational work — look for the simplex first, not the complex. And that was precisely the situation. It was obvious! The onset of the colder weather meant changes in the normal activities around the glasshouses — **WATERING and FERTILISING! !**

An immediate check was made. More water was applied, even though the weather was a typical Melbourne June, and the solution was found. Water **MUST** be applied between feedings at the rate of 3 for 1. That is for each watering containing nutrition there must be at **LEAST** three applications of water without any nutritional material in it before the next feeding.

But, there is a strong possibility that two problems had been created, not one!

The first, and most likely, was that the plant was taking up an inproportionate amount of water and nutrient, thus causing a "salting up" of the plant's tissue. If this was so then the plant would have been dropping its leaves to dispose of the excess nutrition. This is not an uncommon practice for plants. They will also drop leaves in summer to conserve moisture in drought conditions.

The other condition I will deal with later on.

A summary of the facts so far indicates that we have a set of symptoms which can be an indication of the onset of cultural problems. To recognise them the season in which the symptoms occurred is important. Here is a check list:—

1. **SUMMER LEAF DROP.** Poor root system, either dead or dying (this will also be coupled with shrinking bulbs). Or if the roots are sound, then insufficient water is being applied. If the leaves are yellow and dull, especially at the tips, then an iron and/or magnesium deficiency prevails. To cure that problem apply magnesium sulphate and Hortico's Chelated Iron at the rate of two teaspoonfuls per gallon of water, for the first two feedings, then halve that for the third and subsequent feedings. Feed those two elements at least once a week throughout the year to all your orchids — it can't harm them.
2. **WINTER.** Leaf yellowing and leaf drop will be caused by unhealthy or dead roots, over wet, poorly-aerated compost, unbalanced nutrition, or insufficient water being applied between nutrient applications. Check root condition first.

   NOTE: If a plant appears sick **ALWAYS** check the roots first, **NEVER** last.

In June AOR Nichols (2) stated that if less than five waterings per week were applied during the colder months, growth of cymbidiums was inhibited. He also confirmed that the coarseness of the compost is a key factor in plant growth. This one factor, the coarseness of the compost, provides the answer to so many of our cultural problems. With a coarse mix we can feed and water at will, the roots are aerated and any toxic substances can be flushed from a pot quickly, and adequately.

None of my orchids grown in a coarse mix suffered the leaf yellowing and dropping that others produced. They all received the same nutrition, lighting and watering so the problem **HAD** to be associated with the compost and watering. What is indicated is that the **FINER** the mix the more frequent the watering must be, but this of course induces root rot very rapidly. Obviously finer mix cannot be flushed out as rapidly or efficiently as a coarser mix.

After several years' work I have concluded that

sand (even coarse sand) and peat moss are two of the worst possible ingredients to include in a compost. **BOTH** very quickly cause the compost to bind up and increase the rate of water retention. The only ingredients I now use are coarse pine bark, charcoal, peanut shell, rice hulls and chopped bracken fern (stems and leaf). Sand, or even river gravel, retains water and that is **NOT** what is needed. I have yet to meet up with an epiphytic or lithophytic orchid growing naturally that had sand in the leaf litter in which it was growing! ! !

All orchid growers should need no reminding that while we are unable to grow orchids as they grow naturally we, at best, can use a very poor substitute — a pot.

In nature many orchids have an almost infinite space in which to grow, but in a pot space is finite and the compost would not be aerated from every angle as it would be in natural conditions, just at the top and the bottom of the pot. A cattleya on a tree trunk would never suffer from over-wet roots, a terrestrial orchid would have excellent drainage with rain flushing the soil, and compost regularly and of course as water receded air would replace it.

While growing our orchids we should copy nature as best we can **BUT** all the research now being concluded shows that in pot culture we have to make various modifications to the compost, watering and fertilising of our orchids so that it compensates for the restrictions we have introduced.

Now to the second possibility for the leaves dropping.

Having cured the problem by watering a further question was raised. Was this related to pH and its effects on growth. It was just possible that a low pH might also have been a contributing factor.

It is time to point out now the topic is purely discussional and (perhaps) not fact. Maybe it will open up our thinking a little on the whole aspect of nutrition and watering.

In many circles one is given the impression that pH must be at certain, fixed low levels. That is, the pH has to be within a narrow range, circa pH 5.2 – pH 4.8. And to achieve this certain controls have to be introduced in our watering and or compost.

At the 9th World Orchid Conference a paper was presented (3) on the effects of initial pH on orchid plantlets. The study indicated that pH levels could be quite flexible within a much wider spectrum than we were accustomed to accept. Tissue plated into media where the pH was pH 8.0 did not harm the tissue, in fact within eight weeks the pH had dropped to pH 5.8 or lower. Why the pH drop? And would that be normal in natural circumstances.

The conclusion that could be reached from this paper is that pH (while it is within certain limits), is of no great consequence to the plant's health and well-being because the plant itself creates the level of acidity in its own environment. In flasks, unlike natural conditions, there is no flushing of toxic nutrients, and replenishment of fresh, balanced nutrients so there must be considerable variance between flasking technique and normal pot-growing techniques.

The drop in pH reported in that paper was not unlike pH changes I was experiencing in my tests. The most likely area to commence checking pH was with flasks of plants, as others had done because they are a source of a quick answer and the results can be reviewed much earlier than testing plants in pots, but one must be wary of succumbing to the belief that flask techniques are similar to normal growing methods.

I had over several years noted that plants in flasks occasionally would simply die for no reason whatsoever. I began checking the pH readings of a full range of flasks, from various sources which were both healthy, or unhealthy. The picture that began to emerge was that some, with a pH lower than pH 5.0, were the ones that died, and those that were over pH 5.5 were usually healthy. I made up some test flasks with the pH as high as pH 7.0 and began some tests.

Any flask which had a pH reading of pH 6.2 were the best, but there was very little difference in the range pH 7.0 to pH 5.5. Lower pH readings gave poorer growth responses. In some the pH would drop for no apparent reason and there was no obvious factor that pointed to an answer. That is until good old "Simplex and Complex" reared its head once more!

I was intrigued by the thought that perhaps every plant illness attributed to pH might not be so after all. In fact so long as the pH was between pH 8.0 and pH 5.5, and no unusual alkaline or acid solution was allowed near the pots, most orchids would grow very successfully.

The one glaring factor was that true epiphytes growing "au natural" would find it virtually impossible to receive moisture that was much lower than pH 6.5 (unless of course it was located close to an industrialised area where acid rain was prone to fall!).

I can confirm that orchids do not like an acidity level below pH 4.8 because I managed to kill some plants rather quickly in some of the tests! ! !

To cut a long story short. I could see no reason why we had to be concerned about pH because if we fed plants nutrients that get lower than pH 6.2 the plant, and the watering would do all that

was necessary to maintain a natural pH range. In fact only two factors had to be noted. (a) If the pH did by some remote chance rise above pH 7.0 the type of phosphate used would need to be changed from H_2PO_4 to PO_4, or, if the nutrient fed was lower than 5.5 more calcium would be required (up to 200 parts per million of nutrient liquid), to counteract the acidity.

It is therefore desirable that one should check the pH level of the liquid fertiliser being used and if it is below pH 5.5 do not use it, without adding calcium to the solution.

Now, my reasons for my conclusions are simple.

If we understand basic chemistry it will be noted that all chemical elements are either a cation (one which has a positive charge (+)) or an anion (an element which has a negative charge (−)). Plants require both positively and negatively charged elements to perform their functions and it is therefore only natural that any nutrition must contain both. And if we feed our orchids any good fertiliser that is what will be provided.

If a check is made on a diluted Aquasol solution (for example), it will give a pH reading of (circa) pH 6.2 — presuming the water supply is reasonable. If that liquid is poured into the pot containing our orchid a change takes place. The pot is suddenly supplied with liquid containing a quantity of cations and anions in a solution which is slightly acid.

Our plant will take up the quantities of the cations and anions fed to it but unwanted ones remain in the compost. Those that remain are likely to be balanced in favour of anions. If so pH will drop, and the compost will become more acid.

What then could all this add up to? I would suggest that providing one has a satisfactory water supply and one adheres to a good liquid fertiliser then pH can be completely forgotten, for, providing an adequate watering and feeding cycle is created, and a soundly-formulated fertiliser is supplied to the plant it will create its own pH environment automatically.

The cycle would be this:

When nutrient is applied the pH would rise slightly because of the ion content of the fluid, the plant would then begin to absorb a greater volume of cations than anions and pH would be lowered. Fresh water will flush out the excess, unused negatively-charged elements, in readiness for the next application of nutrients which will restore further quantities of both cations and anions. All of which creates a constant rise and fall of the pH.

If we break the cycle then trouble starts to appear! To maintain the cycle we have to add nutrient, water three or four times then apply more nutrient. If this cycle is maintained then the pH factor will not be a cause for concern.

One thing that will become evident if the cycle is properly maintained is just how little fertiliser is required to produce a massive cymbidium specimen plant. I have succeeded in flowering tetraploid cymbidium seedlings (genetics permitting), in two and a half years from flask with multiple spikes of 15 and 16 flowers. The best so far is five spikes on a single seedling.

By now the importance of regular balances in our orchid culture should be apparent. Of all the factors involved in growth water holds the key to so many of them. If we can appreciate the purposes of water then we should have no trouble growing orchids correctly.

Orchid growing can be complex if we allow it but with common sense it becomes simplex! Acquiring common sense is not so simplex!

Lot 18 Dandenong-Hastings Road,
Cranbourne South, Victoria 3977

References:
(1) Mineral Nutrition of Plants: Principles and Perspectives. Epstein.
(2) Nutritional Aspects in the Culture of Cymbidium Orchids. D. G. Nicholls.
(3) Nutrition of Orchid Plantlets: Effects of Initial pH. Jariya Piriyakanjanakul and Thavorn Vajrabhaya. Proceedings of the 9th World Orchid Conference. pp. 67-73.

Further Reading:
(1) Plant Structures and Functions: Greulach. (Collier-McMillan).
(2) Plant Physiology: Salisbury and Ross: Wadsworth Publishing Company, California, USA.
(3) Botany: An Introduction to Plant Science: Robbins, Weier, Stocking. Wiley International.

REASON BEHIND THE NAMES

This extract from the *International Code of Botanical Nomenclature* outlines the requirements for naming plants:

"Botany requires a precise and simple system of nomenclature used by botanists in all countries, dealing on the one hand with the terms which denote the ranks of taxonomic groups or units, and on the other hand with the names which are applied to the individual taxonomic groups. The purpose of giving a name to a taxonomic group is not to indicate its characters or history, but to supply a means of referring to it and to indicate its taxonomic rank. This Code aims at the provision of a stable method of naming taxonomic groups, avoiding and rejecting the use of names which may cause error or ambiguity or throw science into confusion. Next in importance is the avoidance of the useless creation of names. Other considerations . . . are relatively accessory."

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Darwin in a letter to George Bentham.

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Some of the AOC Awards —



Above: **Award No. 356.** Cymbidium Bingo 'Pink Beauty', HCC/AOC-OCSA. A novelty type, lovely for colour and shape. Grown by G. Forrest.





Above: **Award No. 375.** *Dendrobium taurinum* x *violaceo-flavens* 'Numinbah Beauty', HCC/AOC-QOS. A wonderful indication of the potential in New Guinea hybridising. A provisional award subject to registration. Grown by F. A. & B. Beadle.

Left: **Award No. 366.** *Lc.* Maria Ozzella 'Black Magic', AD/AOC-VOC. Intensity of colour like this is rarely equalled in cattleyas. Grown by J. & B. Brighton.

1982 a great year for Orchids

The 1982 Australian Orchid Council Awards are notable for variety of genera and magnificent colour. Only a few can be shown here but the other winners were of the same high standard.

Right: **Award No. 370.** Cymbidium Sensation 'Purple Perfection', AD/AOC-NSW. A very interesting plant because it came from a meristem flask of propagations from C. Sensation 'Aminya'. In flask it became a tetraploid. Under the rules of nomenclature it had to be given a new cultivar epithet. Grown by A. P. Duffy Pty Ltd.



Below: **Award No. 355.** *Cymbidium* Mimi 'Lucifer', AD/AOC-OCSA. A novelty, judged by State panels to be the "AD of the Year". This photo scarcely conveys the magnificence of more than 140 flowers carried by the plant. Grown by M. R. Chenoweth.

For "Orchid of the Year" see front cover.



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AUSTRALIAN ORCHID COUNCIL

National Awards for twelve months to 30-6-82

During the year 32 awards were confirmed and one provisional award made. These can only be regarded as Australia's top orchids.

There were three Awards of Merit, 22 Highly Commended Certificates, and eight Awards of Distinction.

A feature was the diversity of genera: two HCC's and two AD's went to novelty cymbidiums, and of the nine standard cymbidiums one was an AM, one an AD, and the rest HCC's. Phalaenopsis was represented by one AD, and lycaste by an AM and HCC.

Three species received awards, one being HCC to a clone of the fine Papua New Guinea species *Dendrobium lasianthera* 'Sylvan Glade'. Another to an outstanding *Paphiopedilum tonsum*, var. *curtisifolium* 'Splendens'. The third was a beautiful *Lycaste virginalis* var. *alba* 'Snow Queen'.

344 *Cymbidium* Tapestry 'Zita', AD/AOC-OCSA. A cross of Khyber Pass x Voodoo. Outstanding red flower with striking labellum heavily banded red. Adelaide Orchids.

345 *Odontioda* Cathay Pacific 'Roby', HCC/AOC-OCSA. Two racemes of 8 and 9 shapely and distinctive flowers, each a greyed purple, the labellum edged with white and orange keel. (= *Odm.* Cathay x Dalmar). Adelaide Orchids.

346 *Paphiopedilum* Pacific Ocean 'Josephine', HCC/AOC-OSWA. White dorsal with yellow-green centre, heavily spotted with red. Petals upper half a greyed purple, lower graded green over light brown, spotted at base. H. Lodge.

347 *Blc.* Lucky Strike 'Joy', HCC/AOC-NSW. Tepals purple. Lip red-purple with yellow streaks in throat. (= *Blc.* Mem. Crispin Rosales x *Lc.* Bonanza). John Williams.

348 *Oncidium* Golden Cloud 'Jacqui', HCC/AOC-NSW. Just missed AM. Yellow shirt with top greyed orange. Tepals greyed orange. (= Mem. Sam Strahart x Sultamyre). W.L. Hughes.

349 *Paphiopedilum* Kay Rinaman 'Val', HCC/AOC-NSW. Outstanding green flower with high award quality. Just missed AM. Dorsal yellow-green with white border. Petals yellow-green with lip slightly darker. From Yerba Butra x Diversion. S. Condon.

350 *Paphiopedilum* Recompense 'Wondabah', HCC/AOC-NSW. Dorsal a greyed purple with wide white edge. Petals yellow-green overlaid with greyed orange, fading at edges with a band of yellow-green at bottom. Ventral yellow-green. Pouch a greyed orange. (=Veritilario x Heather Bell). Wondabah.

351 *Cymbidium* Jubilation 'Starlight', HCC/AOC-VOC. A semi-arching spike with eight bright yellow flowers of good shape and red lip. From Wallara x Borough Green. Hodgins Orchids.

352 *Dendrobium lasianthera* 'Sylvan Glade', HCC/AOC-QOS. This beautiful PNG species carried seven spikes, one with 13 flowers, a total of 28 on the others. Tepals a clear and distinctive red-purple, labellums a greyed purple. B. Scriven.

353 *Paphiopedilum* New Edition 'Lenora', HCC/AOC-OSWA. Dorsal a yellow green with white surround and spotted greyed purple. Petals greyed purple with some yellow-green, lower half spotted. From World Exploit x Nowara. Mr. and Mrs Munnings.

354 *Cymbidium* Jean Slattery 'Cecil Park', HCC/AOC-OCSA. One spike with 12 flowers. Not quite enough points for shape to achieve AM. A crossing of Miretta and San Miguel. Adelaide Orchids.

355 Novelty *Cymbidium* Mimi 'Lucifer', AD/AOC-OCSA. Carried seven spikes each with about 20 flowers. Outstanding red tepals well complemented by white labellum banded dark red. From *C. pumilum* x Doris Aurea. AD of Year. Illustrated. M.R. Chenoweth.

356 Novelty *Cymbidium* Bingo 'Pink Beauty', HCC/AOC-OCSA. Four spikes of 20 to 25 fully open flowers. One spike of 17 buds. A lovely eye-catching pink with a very attractive labellum. A cross of Fairy Wand and Carisona. G. Forrest. Illustrated.

357 *Cattleya* Chocolate Drop 'Kodama', AD/AOC-OCSA. Two racemes of 7 and 5 flowers, each chocolate red, brilliant and glistening like lacquer. A cross between the species *C. guttata* and *C. aurantiaca*. K. and G. Staples.

358 *Paph. tonsum* var. *curtisifolium* 'Splendens', HCC/AOC-NSW. Three flowers on three stems. Dorsal with white, green, and purple stripes. Petals yellow-green with purple overlay and dark brown spots. Pouch same yellow with purple overlay. J. Jannese.

359 *Cymbidium* Wallamurra 'Jupiter', AM/AOC-NSW. Unusual colour with dark veining. Lip a red banded white with touch of yellow in keel. Excellent shape. From Warella x Termana. Wondabah.

360 *Cymbidium* Jubilation 'Geronimo', HCC/AOC-VOC. A much admired yellow with red spots on lip and red throat. (= Wallara x Borough Green). R. Hodgins.

361 *Cymbidium* Western Hill 'Hobart', HCC/AOC-VOC. Excellent red exhibition flower with red banded lip. Throat spotted with red and yellow. McBeans Australia.

362 *Odontioda* Helen Stead HCC/AOC-VOC. Flowers held well above foliage. Petals and lip purple, the throat brown stripes on lemon. A cross between *Oda.* Joe Marshall and *Odm. crispum*. Gerald McCraith.

363 *Phal.* Abram McAndless 'Highercombe', AD/AOC-OCSA. Fine candy stripe flower with dark red labellum. Nine flowers on spike. From Redport x Percy Porter. Johnston's Orchids.

364 *Lycaste* Koolena 'Elva', HCC/AOC-NSW. White petals suffused with purple. Labellum white with touch of yellow in keel. Sepals red purple fading at edges, white at base. A cross of *L.* Auburn and *L. skinneri* (syn. *virginalis*). A.F.W. Alcorn.

365 *Cymbidium* Jubilation 'Cashmere', HCC/AOC-VOC. A graceful arching spike of 14 pale green flowers (= Wallara 'Gold Nugget' x Borough Green 'Conference'). R. Hodgins.

366 *Lc.* Maria Ozzella 'Black Magic', AD/AOC-VOC. Three lovely flowers of deep purple, well presented. From *Lc.* Lee Langford x *C.* Nigrella. See illustration. J. and B. Brighton

367 *Lycaste virginalis* var. *alba* 'Snow Queen', AM/AOC-NSW. One flower of outstanding shape and colour, a clean pristine white with hint of yellow in throat. P. Duffy.

368 *Cattleya* Princess Bells 'Betty's Bouquet', AM/AOC-NSW. A clear white with yellow throat, from a cross between *C.* Empress Bells and *C.* Bob Betts. Orchid of the Year. See cover. Mr. and Mrs R. Saunders of Casino, NSW.

369 *Cymbidium* Sally Alexandra 'Colmaurin', HCC/AOC-NSW. Tepals yellow-green, labellum white with red-purple spots on edges and yellow keel. From Mary Ann x San Miguel. C. Fraser.

370 *Cymbidium* Sensation 'Purple Perfection', AD/AOC-NSW. A chance meristem tetraploid from the clone 'Aminya'. Tepals red-purple with fine white edging. Labellum cream in throat with pale yellow keels, and edged with suffused red-purple. (= Spartan Queen x Fascination). Illustrated. A.P. Duffy Pty. Ltd.

371 *Dendrobium striolatum* 'Lesley', HCC/AOC-NSW. Covered in yellow-green flowers. Ian Brewster.

372 *Phalaenopsis* Opaline 'Gillian', HCC/AOC-NSW. Narrowly missed AM. White segments. Labellum edged yellow with some red-purple spots and shading at base. Keel yellow with fine red-purple spots. R. Montgomery.

373 *Dendrobium* Peter Basey 'Royal Purple', AD/AOC-QOS. The most outstanding rich velvet purple colour ever seen in this type of orchid. From a cross between *D.* Taurus and *D.* Amber Glow. F.L. and C.D. Basey.

374 *Den.* (taurinum x violaceo-flavens) 'Numinbah Beauty', HCC/AOC-QOS. Provisional. Eight spikes with flowers fully open, two with buds. Lip wide with rich purple violet colour, petals a yellow-green and sepals yellow. A wonderful harmony of colours. F.A. and B. Beadle. Illustrated.

375 Novelty *Cymbidium* Winter Fire 'Trudy Ray', HCC/AOC-OCSA. A lovely pink with outstanding labellum. From Gidget and Bexley Radiance. M.R. Chenoweth.

376 Novelty *Cymbidium* Winter Fire 'Abbeville', AD/AOC-OCSA. Three spikes, two having fully nine and seven opened flowers with beautiful dark pink segments, complemented by outstanding labellum with heavy bands of dark wine red. M.R. Chenoweth.

IMPORTANT DISTINCTION

". . . the expression cultivar epithet means the word(s) constituting the final term of the name identifying an individual orchid cultivar — that is to say, the word(s) enclosed in single quotation marks; the expression *cultivar name* is reserved to mean the entire name of an individual orchid cultivar — from generic name to cultivar epithet inclusive."

Quoted from *IOC Handbook on Nomenclature*, p.8.

AOF DONORS

The Trustees of the Australian Orchid Trust Fund wish to acknowledge with appreciation the following who have contributed generously in supporting the work of the Foundation during the year 1981-82.

Victoria: ANOS Victorian Group, Blair M., Campbell G., Carr G., Cannon D., Clark K., Courtney N., Derham M., Ettwell F., Geelong OS, Kerr A., Mornington POS, McCabe B., McCraith G., Offerman R., Parkin A., Pearce R., Phillips P., Rentoul J., Richards H., Robertson A., Ryan M., Vaughan J., Warringal OS, Wettenhall M.

South Australia: Hargreaves R., NOSSA, Nash R., Nesbitt L., Simmons J., Womersley J.

Tasmania: Devonport OS, Tasmanian OS, Woodward J.

Northern Territory: OS of Northern Territory.

ACT: Clements M.

Queensland: Campbell C., Grundon N., Gympie OS, Jones D., Krueger M., Mackinney J., Martin R., North Brisbane OS (in memory John Porter), Orchid Species S., Queensland OS, Stocker J., Sunshine Coast OS, Tropical Queensland OC.

New South Wales: ANOS Newcastle Group, Banks G., Betts J., Bartholomew R, Giles P. (in memory Leo Giles), Henry T., Husted E., Kerr R., Marks J., St. George OS, Upton W., Waldie S., Wollongong Native OS.

Western Australia: Bunbury OS, Lodge H., Northern Districts OS, Voigt D.

Overseas: England — Allison Miss M., USA — Easton A., New Zealand — Cuthbertson M., Harper J. and E., Maunder R., Vanuatu — Slade H.

Gerald McCraith, Chairman.

EUROPEAN ORCHID COMMITTEE

1985 Congress for Britain

On the occasion of the 6th European Orchid Congress, March 25th to 29th, 1982 in Hamburg, there also took place the traditional meeting of the European Orchid Committee (EOC) where representatives from eleven European countries were present. For the outgoing chairman, *Mr. Emil Luckel*, Federal Republic of Germany, the Committee unanimously elected *Mrs Ena Haywood*, United Kingdom, representative of the British Orchid Council as the body which will be organizing the 7th European Orchid Congress in 1985.

Furthermore, the Committee decided to introduce the position of a standing secretary, this in view of the increased activity and the intensification of contacts between the orchid societies of Europe, as well as the endeavours to activate relations to Overseas' organizations. For this position, the Committee elected *Mr. Charles F. Oertle*, Via Sottochiesa, 6616 Losone, Switzerland, member of the EOC, to whom in future all correspondence is to be forwarded. It should be mentioned in this connection that the secretary's office will be open to all individual members of the European Societies for any problems they may have and that any demands or queries from Overseas will also be readily dealt with.

ANNUAL HYBRID LIST AVAILABLE NOW

As a special service to the interested members of the individual societies, the EOC decided two years ago, to publish an annual booklet containing the newly registrated orchid hybrids of one entire year in alphabetical order and to issue this publication to all individual members upon request at cost. The edition for 1981 can be ordered now from the secretary, Mr. Charles F. Oertle, Via Sottochiesa, 6616 Losone, Switzerland. Price per surface mail in Swiss Francs 17 or $A9.50; air mail SF19.50 or $A10.50. Cheque with order in either currency should be made payable to Charles F. Oertle, alternatively remit through bank to Credito Suizzero, Locarno, Switzerland for a/c 425172-60, Charles F. Oertle.

EXPLOITED MYCORRHIZA

From Karl Marx's standpoint wealthy Victorian orchid-growers enjoyed their orchids as a consequence of the sweated labour of underpaid miners whom they never saw. Research on mycorrhiza suggests that orchids can be regarded in much the same way — as ostentatious floral capitalists dependent upon the unseen activities of fungi — W. T. Stearn in *Proceedings Third World Orchid Conference.*

Important decisions at AOC Meeting

The twenty-second Annual General Meeting of the Australian Orchid Council took place in Brisbane on Wednesday, September 29th, 1982.

This was the last meeting at which the retiring President, Mr. Frank Slattery, officiated, and for him it was the culminating point in a career of around 50 years in orchidology during which he has been associated actively with every important development in Australia. It is certain his influence will be felt for many years to come.

Election of Officers: Mr. C. Hill of Queensland has been elected President, and Mrs Tania Tinney is Secretary. This is the same duo which led the very successful organising team behind the Seventh Australian Conference.

Mr. A. Bell of NSW was elected a Vice President. A second Vice President is to be elected by postal ballot.

Honorary Treasurer is Mr. R. Williamson. Registrar-General, Mr. L. Peatie. Programme Director, Mr. G. McCraith. Programme Librarian, Mr. Gunter Haar. Conservation Chairman, Mr. W. Upton. Public Relations Officer, position to be decided by postal vote.

Correspondence: The Governor General has agreed to be Patron. There has been correspondence with the New Zealand Orchid Council on co-operation and AOC slide programmes will be made available. The European Orchid Council has expressed a desire to affiliate with the AOC.

Conference Dates: Approval was given for Victoria to hold the next Australian Orchid Conference in 1984. This coincides with the 150th anniversary of that State. South Australian is to hold the Conference in 1986 and this also coincides with that State's 150th Anniversary. NSW is to have the Conference in 1988 to coincide with Australia's bi-centenary.

New Members: The Australian Orchid Foundation has been welcomed as a Scientific Associate. The following have also been welcomed as Associate Members: Northern Districts Orchid Society WA; Port Augusta Orchid Club; Cymbidium Club of Australia; Marybong Orchid Society; Bendigo Orchid Society.

Council Membership: A sub-committee is to consider ways whereby Regional Councils could have a voice on Council.

JUDGING MATTERS

Lycaste Judging: Victoria is to formulate a standard for the genus *Lycaste* for presentation to the next AGM.

Regional Judging: Held over until 1983.

Presentation for Award: It was agreed that once a plant has been submitted to a State or Regional Panel, whether it has received an Award or not, it cannot then be submitted to a different panel. State or Regional, on a different flowering.

Judging of Cymbidiums: The wording of the "habit and arrangement of inflorescence" section of the standards is amended to provide that the second sentence reads as follows: "It should be long and may be arched or straight, but not twisted".

Awards for 1981-82: These are reported and illustrated elsewhere in this issue.

NEW STANDARDS FOR NATIVE JUDGING

The 1982 AGM approved the following revised standards for the judging of native species and native hybrids. It was devised by a sub-committee of members of the OSNSW Judging Panel and of ANOS. This will ensure judging by both the AOC and ANOS will be on the same basis.

It is intended in the near future to consider separate standards for terrestrials.

AUSTRALIAN NATIVE ORCHID

Definitions: A Native Orchid is one found growing on the Australian mainland, Tasmania, or any coastal island under the political control of an Australian State, but does not include those from Trust Territories or natural hybrids.

The Exhibit: An exhibit should be well established and must not show signs of being recently collected. Where clonal differences are apparent in the exhibit, the exhibitor may be called upon to nominate the plant to be judged.

Shape (30 points): To be symmetrical about a vertical plane and of optimum shape within its own species.

Colour (25 points): Shall include white on any other colour or combination of colours. It should be clear, glistening and fresh, not smudgy or blurred. All markings and shadings should be well defined.

Size (10 points): Points to be allocated based on the optimum size of the species being judged.

Texture (10 points): The flower or flowers shall be of good substance and texture, firm, fresh, lustrous, and without blemish.

Floriferousness (15 points): The exhibit should carry a good floral display in proportion to its size. If it is the habit of the inflorescence to open progressively, only fresh and open flowers are to be judged.

Habit of Inflorescence (10 points): The stem should display the flowers to the best advantage. It may be arched or straight and should have the flowers evenly distributed.

AUSTRALIAN NATIVE ORCHID HYBRID

Definitions: An Australian Native Orchid Hybrid shall be the progeny exclusively of Australian Native Orchids or their hybrids; that is to say, no exotic orchid

shall be included in their ancestry. An Australian Native Orchid Hybrid shall not include *Dendrobium* hybrids of the Ceratobium and Phalaenanthae sections, as standards for these already exist.

The Exhibit: *Terrestrial* — any number of plants of the one grex in the one container. *Epiphyte* — a plant in a container or any other medium of display, to be judged as a whole.

Where clonal differences are apparent the exhibitor may be called upon to nominate the plant to be judged.

Shape (30 points): To be characteristic of the genus or section and should be outstanding for its type. Bigenerics or multigenerics should be better than either or both parents.

Colour (30 points): Shall include white or any other colour or combination of colours. It should be clear, glistening and fresh, not smudgy or blurred. All markings should be well defined.

Size (10 points): Points to be allocated based on the optimum size of the hybrid being judged.

Texture (10 points): The flower or flowers shall be of good substance and texture, firm, fresh, lustrous and without blemish.

Floriferousness (10 points): The exhibit should carry a good floral display in proportion to its size. If it is the habit of the inflorescence to open progressively, only fresh and open flowers are to be judged.

Habit of Inflorescence (10 points): The stem should display the flowers to the best advantage. It may be arched or straight and should have the flowers evenly distributed.

INTERMEDIATE CYMBIDIUMS

It is felt that the AOC could give a lead to the rest of the orchid world by creating a standard for the new term 'Intermediate Cymbidium' thus leaving the way open for proper use of the term 'novelty Cymbidium' to apply to plants such as *C.* Cleo's Melody 'Freakout' which for award purposes could be covered by the AD standard.

Standard for Intermediate Cymbidiums

This classification is to cater for the increasing number of outstanding cymbidiums that are too large to be miniature cymbidiums and yet not large enough to be standard cymbidiums, because of their breeding. In this class, a plant need not be miniature in growth characteristics in order to be acceptable, but must have a miniature species in its breeding or background.

Shape (25 points): The flower should be circular in outline, slightly concave and well balanced; hooding, furling, reflexing and other distortions are undesirable; the labellum should be wide and lend balance to the flower, the distal end should not turn under.

Colour (25 points): Shall include white or any other colour or combination of colours, it should be glistening and fresh; all markings and shadings should be evenly distributed. The colour of the labellum should be pleasing and shall be considered in assessing the general effect.

Floriferousness (15 points): The inflorescence being judged must carry not less than 10 flowers and at least 80% of the flowers shall be fully open. Points shall be allotted for open flowers according to the following scale:

16 or more flowers	15 points
15 flowers	14 points
14 flowers	13 points
13 flowers	12 points
12 flowers	11 points
11 flowers	10 points
10 flowers	9 points

Flower Arrangement (15 points): Each raceme should display its flowers without interference from the foliage. It may be straight, arching or pendulous, the flowers well and evenly spaced. Bunching is a defect.

Substance and Texture (10 points): The flower should be of good substance and texture, firm fresh lustrous and without blemish.

Overall Charm and Distinction (10 points): The foliage should be firm and fresh without blemish, with all dried tissue removed. The raceme should have an indefinable quality of charm, attractiveness and distinction. New or rare colours or combination of colours, attractive labellums, outstanding habit of raceme, are qualities to be assessed under this heading.

General Provisions: When judging intermediate cymbidiums the rules concerning percentage of assessment for shape and colour shall apply.

Seedling Definition: The following definition of a seedling will apply to all genera:

'Seedling' shall mean a plant (being the whole clone undivided) not exhibited at a show, meeting or award judging in a previous flowering season since being raised from seed.

For exhibition purposes, seedlings shall retain their status of seedlings throughout the flowering season in which they are first exhibited at a show, meeting or award judging.

GENERAL MATTERS

Fumigation of Imports: The AOC is to make representations to the Australian Government for an alternative to methyl bromide in the fumigation of imported plants due to the high mortality rate following its use.

Board of Referees: Mr. J. Mackinney retires as a member of the Board of Referees. Mr. M. Donhardt of South Australia has been appointed to replace him.

The retiring officers, new officers, and delegates are to be congratulated on a most successful meeting and a job well done.

AOC Medallions: This distinctive Trophy is now available to Associate members at a cost of $27.50.

WARNING ON WHITE OIL

AOR has had several reports on plants being affected by the use of White Oil. In all cases it was apparent that this was from using pressure-spray packs. The Mornington OS *Orchid News* points out in a recent issue: "Under no circumstances should the white oil which is sold in a spray pack be used on orchids. This substance has a base which penetrates through the leaves of some orchids and can kill the plant."

Knowledge considered as a means to an end is art; knowledge considered as an end in itself is science. *C. A. Tunipiazeff.*

TALL ORCHID TALES FROM TASMANIA

GWEN SMITH

Gwen Smith loves orchids. They love her and prove it by winning championships at many Tasmanian shows. Your editor heard about her "Magamper" and asked for details. Here they are, plus an acknowledgment of its source, and a reprint of the source with acknowledgments to *The Orchid Advocate*.

Sensible orchid addicts pay little attention to the various extremes of culture we read about from time to time, such as bolstering your bulbophyllum with a beer diet, or dowsing your disa with damp horse manure etc, etc.

Yet, now and again the mind boggles, on reading a success story from one who ought to know what he is talking about. Browsing through an old issue of the *Orchid Advocate* (an American publication), I came across an article written by Mr G. Laird of New Zealand, in which he described his method of using Magamp, and the wonderful results he'd achieved.

Although I was content with the fish emulsion, formula 20 routine I had followed before I read this article, like all growers I wanted to draw nearer to the perfection we all strive for. So I enlisted the aid of Otto Beetz, who is a very clever improviser, and he set his mind to the cheapest way to make this gadget described by Mr Laird. Details and drawing have been included at the end of this article.

Like the Fert-o-mat, and similar devices, the process is very simple. The water flows through a cylinder containing coarse Magamp, absorbing a small amount as it passes through. As Mr Laird says in his accompanying article this seems to be the answer of the old maxim "a little, often".

Quoting Mr Laird once more, how long the Magamp is good for is a bit of a poser, but to be on the safe side, I changed it each month through the optimum growth period, as heavens knows it's a very economical way of fertilizing, and simplicity itself. No longer do I have to worry about setting a morning aside for this purpose, and despite the ongoing love affair we share with our treasures, sometimes their welfare must of necessity take second place when troubles come uninvited. With this method, watering and nourishment are given in one operation.

I have followed this "Kiwi innovation" for the past 16 to 18 months, on all my orchids, this includes cattleyas, paphs, cymbidiums, coelognes, vandas, natives and many other genera, all with great success.

A sprinkling of hoof and horn was added to the mature plants, while the seedlings had an Osmocote supplement. No other fertilizer was used, and plants were watered each day with the Magamp, with a flush through of pure water once a week, during the growing season.

The compost used consists of crushed tree fern, myrtle leaf mould, medium-sized bark, styrene beads and buzzer chips. These are not measured, but added and mixed until I think it looks right. We are fortunate to have running creek water, crystal clear and free of additives. We are 500 feet above sea level, close to the mountains, and almost frost free. The houses have polyscrim walls and fibreglass roofing. The windows are open and covered with shade-cloth to keep insects and birds out, to say nothing of possums and snakes.

We don't aspire to a hot-house, all the heat lovers are in a double-lined house, bubble-pak being used for the lining, and the warmth supplied by a Derby heat bank functioning on off-peak power. This is economical and the minimum temperature is 10°C. It's early June as I write this, and several nice cattleyas are flowering alongside *Paph. villosum*, *Phaiocymbidium* Chardwarense, several oncidiums, the zygos are in all their glory, and ever-blooming *Epiphronitis* Veitchii, odonts have big, fat buds and lovely *Odont. pulchellum* has 15 spikes unfurling. *Cym. tracyanum* has been out for weeks, and Miniature Geraint Benwick has nine spikes in various stages of opening. *Cym.* Dignity 'Barbara' sports five spikes, and several plants have six spikes, while the minis are bursting their hearts with flowers. I know quite a lot of this result is due to the many fine light days we've experienced this summer, but I'm convinced that Magamp applied "the Kiwi way" must take some credit too. Incidentally, the growth on the natives has been nothing short of phenomenal.

When you think of the "Apple Isle", or read in your newspapers of the snow and cold conditions here, don't be misled. In their snug winter quarters, all the gems that you love, flourish here too, it just takes a little more persistent love and conversation between orchid and orchid-slave to achieve results.

RD793, Kindred, Tasmania 7310

"I carefully described to Huxley the shooting out of the pollina in the *Catasetum*, and received for an answer, 'Do you really think I can believe all that'."

Darwin.

Orchid Culture with a "Magamper"

G. LAIRD

I have now been growing orchids for some fifty years, but over the past two seasons I have achieved a standard of growth which I can describe only as exciting in the extreme. It all began with a big clump of *Dendrobium speciosum* which is growing outside on a piece of tree fern trunk. There was a hollow in the top of the tree fern trunk and into this I placed a couple of generous fistfuls of the coarse granules of the time-released fertilizer Magamp. At the time I was also experimenting with the foliar feeding fertilizer from Hoechst, Complesal NPK Liquid, which I used once weekly at the rate of one tablespoon to a five-litre bucket. By the end of the growing season, the growth had gone from ten inches to twenty inches and the clump bore many lovely spikes of flowers.

I reasoned that the doubling of the growth was due largely to the leaching of small quantities of fertilizer from the Magamp. I thought that all my orchids should respond in a similar manner if I could devise some way of giving them a daily watering with water that had passed through Magamp.

I had made a brass cylinder, about twelve inches long, and one and a half inches in diameter, closed at one end, but with a screw cap and washer at the other end. A male standard hose connection was sweated into each end, and a piece of fine gauze placed at both ends to cover the inlet and the outlet. A Handi Mist plastic hose was screwed onto the outlet, while the other end fitted onto the hose. The cylinder was filled with the coarse Magamp and six days a week in the growing season, all my orchids were watered through this device. NEVER ON SUNDAY, however, when copious draughts of plain water were given in order to avoid a build-up of toxic salts.

The results have been dramatic. In many cases pseudo-bulbs have doubled in size. On the cymbids the leaves became broad, thick and leathery. It does not seem to produce soft, floppy growth. Flower production seems to be good. On two of my odontoglossums recently I had three flower spikes from one forward lead bulb; something I have never seen before in all my years of growing orchids.

At present I am changing the Magamp in the waterer once a month, although the crystals, when used in the mix, are supposed to last two years. The master agents in New Zealand for Magamp are analysing some of my used granules to see whether they are in fact spent.

Many and varied mixes will grow orchids successfully. However, because I have so many, I have been searching over the years for a universal mix which wil grow most types.

Basic Mix

2 x 5-litre buckets — No. 1 fresh water sand (as used in cement plaster finishing mix).
2 x 5-litre buckets — No. 2 vermiculite.
4 x 5-litre buckets — peat (preferably imported Irish, Cumberland or German sphagnum-type).
60 grams — hoof and horn meal or dried blood (double this to 120 grams for strong growers like cymbidiums).
45 grams — superphosphate.
15 grams — sulphate of potash.
15 grams — potassium nitrate.
60 grams — dolomite lime.
45 grams — calci carb precip (from your chemist).
This should give a pH of about 6.

Method of Mixing

I use an old hand-type concrete mixer. The dry sand and the vermiculite go in first. The fertilizers and limes are added and mixed thoroughly. The peat is added after first having been moistened so that a fistful will stick together when squeezed. In this way it picks up the sand and the fertilizers evenly and is in the right condition for sterilising.

Sterilising is not difficult. I use two old washhouse coppers. In one, I place about twelve inches of water. Over this I use a grid which holds a wire basket or sack of the basic mix. A long copper-type electric immersion heater is used and the second copper is inverted over the first. I give it about four hours from a cold start. The mix is ready to use as soon as it cools. (NB — An isolating transformer should be used if the steriliser is out-of-doors).

Additions to the Basic Mix

No orchid likes wet feet. To every bushel of the basic mix I add half a bushel of extra drainage in the form of steam-sterilised sweet-pea-seed-sized scoria or pumice, or crushed crocks or granulated charcoal. At least some of this drainage should be in the form of charcoal. Incidentally, I reclaim all my drainage material from the used mix, steam sterilise it and use it over and over again.

Working of Mix

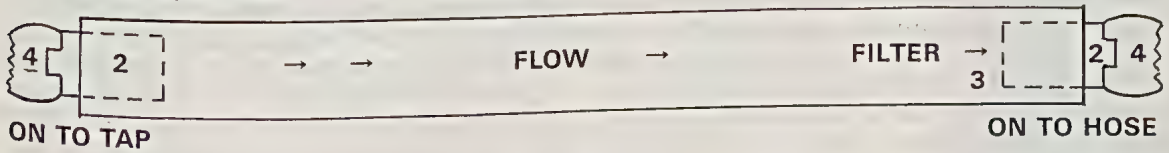
Once you include the hoof and horn or the dried blood, the mix begins to "work" and should be used within a reasonable time. If you leave out the hoof and horn or the dried blood, the mix will keep indefinitely. I do it this way, then mix up two gallons at a time, adding the hoof and horn or the dried blood, at the last minute.

1. PVC pipe 500 mm x 38 mm (inside measurement).
2. 2 PVC reducers 38 mm to 25 mm male thread.
3. 1 filter 38 mm plastic.
4. 2 Nylex tap connectors 25 mm.
5. 3 Nylex slip-on connections.
6. 2 metres Nylex hose.

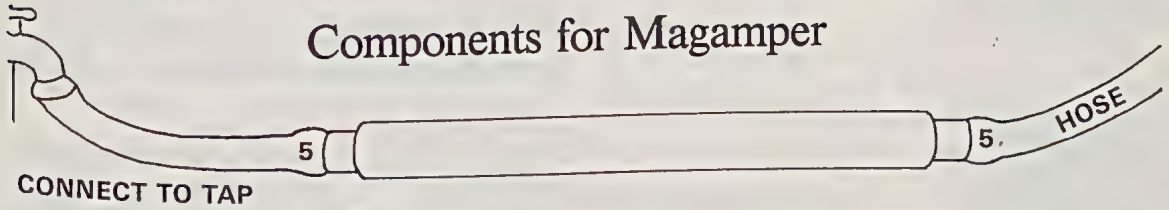
Reducers and filter glued in with PVC glue.

At the tap end, pull the tap connector off, to insert Magamp.

Approximate cost when made $10.00.



Components for Magamper



Variation to the Basic Mix

For paphiopedilums use 120 grams of steamed bone meal instead of the hoof and horn or the dried blood. Paphs do not like an excess of nitrogen.

For cymbidiums and other strong-growing types, add 340 grams of coarse Magamp.

Method of Potting

I find that only the strong growers seem to tolerate Magamp in the actual mix. With all the others, I bring the basic mix up to within a quarter of an inch of the top of the pot. I then place coarse Magamp on top of the mix at the rate of about seven pieces to a four-inch pot. This is then covered with a quarter-inch of steam-sterilised sweet-pea-seed-sized pumice. Once every twelve months if I am not re-potting I remove this top layer of pumice, replace the Magamp granules, and then renew the topping. I have my fresh mix just slightly moist, then use a mechanical vibrating platform with a variable thump. In this way no root damage occurs, as it did in the bad old days of the potting stick. There is no advantage in enlarging the drainage hole in your pots. I cover the hole with a piece of fibreglass fly gauze, then add my crocks, which I also prefer to steam sterilise.

I am sufficiently old-fashioned not to like the thin-walled plastic pots. In them I think the orchids become far too wet. However, I have no quarrel with the foam-walled variety which can be adapted as hanging baskets. Clay pots can be cleaned quite easily and sterilised after placing them in water in one of your coppers and bringing them from cold to 180°F and holding them at that temperature for half an hour.

Additional Feeding

Once a week in the growing season I like to drench my plants with a seaweed preparation, as I think it provides all the trace elements. Likewise I mist leaf feed once a week with Complesal NPK Liquid as this has the metal chelates in it. I might mention that according to my reading, seaweed preparations are particularly effective in the presence of peat.

You will find that this routine definitely increases the size of flowers and improves their texture. Remember never to feed or to spray a dry plant. Do not feed a sick plant. Try placing it in a small pot with only fresh sphagnum moss as a compost. Bring the moss up to within an inch of the top of the pot. Put the Magamp granules around the top, as with the basic mix, and cover with pumice granules to the top of the pot as before.

In conclusion, I would just like to say what a thrill I am getting out of my odontoglossums. I have been trying to grow these lovely orchids ever since I saw them at Charlesworth in England as long ago as 1937. Two years ago I placed them all outside in a sheltered patio. In spite of frosts in the winter, they are thriving. Here again, the greatest improvement has come about since I began to use the Magamp waterer.

With the usual Kiwi ingenuity it is not difficult to make. One of my friends is adapting an old grease gun. Another is using a brass hand-type fire extinguisher. Be sure to try it and may it bring the same success and excitement it has brought to me after all these years of trying to grow these lovely and challenging flowers.

Acknowledgments to *The Orchid Advocate*.

The 8th Australian Orchid Conference will be unique

If the Townsville Conferenced was held this month it would proceed with a swing. And a smooth swing too!

That's how far preparation is advanced. It's the impression your editor obtained when he journeyed north after the Brisbane Conference and met members of the organising committee.

This Conference will be unique because of its tropical flavour and scenery, the friendliness of the North Queenslanders, and the efforts being made to create a different pattern of activities to previous conferences.

It's impossible not to be stirred by the enthusiasm of Chairman Ray Robinson and Secretary Ted Boon. Treasurer Peter Pavia has backed his enthusiasm with a substantial cash contribution as well as obtaining sponsorship from Pacific Films.

One show feature will be a photographers' session between 8 am and 9 am daily during which free print film will be provided.

Accommodation: Ample accommodation is available at hotels and motels. A real bargain is the accommodation available at James Cook University: Full board and lodging in single rooms at only $20 per day. Functions, other than the show, will be held at the university.

Events: The first tour is on Sunday, August 28th. Show setting up takes place all day Monday and on Tuesday morning. There is a Civic Reception at 3 pm, and judging at night.

On Wednesday there is a wonderful tour by coach and boat to a sugar mill and along the Hinchinbrook Passage; the official opening and a cocktail party, followed by a Reef Harvest Dinner.

Lectures occupy Thursday centred around aspects of orchid culture. On Friday there will be a distinct break with tradition when the theme *Australiana orchidaceae* will be sponsored by the Australian Orchid Foundation in the form of a Workshop.

On Saturday, December 3rd there will be a meeting of the Australian Orchid Foundation and its Research Committee. The Banquet takes place that night and Dr. Phillip Cribb of Kew will be the guest speaker. Tours are organised for the Saturday, Sunday and Monday.

Sunday will possibly be the date for an AOC meeting but this has to be confirmed. The Judging Seminar takes place in the afternoon.

Distinguished Speakers: Dr. Phillip Cribb of Kew will discuss the Ceratobium and Latourea sections of the genus *Dendrobium*. Breeding in these sections is becoming more important, and because the natural distribution of these sections overlaps into Australia they are very much the concern of local hybridisers. Dr. Peter Lavarack, an expert on North Queensland orchids, will follow Dr. Cribb's theme. Mr. Wal Upton is well versed in the hybridising of native orchids and their culture. Rev. Canon N. Cruttwell of Papua New Guinea is a born naturalist who has written extensively on the orchids of that country. Several speakers will complement the above personalities.

There will be some famous overseas speakers. They come from USA and England. Mr. John Miller, a Californian, is an authority on phalaenopsis. Mr. Frank E. Shride of the Beall Company, Washington State, is to speak on cattleya hybrids. Mr. Emerson 'Doc' Charles of California is world renowned for his knowledge of paphiopedilum species and hybrids.

Englishman Mr. Terry Adnans of Wyld Court Orchids is well known through his articles in the English *Orchid Review*. He is acknowledged as an expert on the genus *Lycaste*.

Register early and save: Registration before 31/1/83 is $45.00. Before 30/4/83 is $50.00. Before 31/7/83 is $55.00.

Details of tours and other costs are in the Conference brochure obtainable now from: The Secretary, 8th Australian Orchid Conference, PO Box 129 Townsville, North Queensland, 4810. Australia.

ELEVENTH WORLD ORCHID CONFERENCE

Miami waits for you

The Conference in March 1984 is only a little over a year away. Now is the time to notify your intention to attend. Your advice will help the Committee to make reasonable attendance projections.

All that is necessary is to send a note or postcard indicating your plans.

State your intention to register and whether you will be alone. If you are bringing another registrant, or a party of registrants, specify the exact number.

Give the type of hotel accommodation you require and for how many people.

State whether you would prefer alternate accommodation with a local family.

State whether you wish to enter an exhibit or plant(s) in the show. Or if you wish to take commercial space.

Mention if you require pre or post tour information.

Please forward this information with your name and address to: Eleventh World Orchid Conference, PO Box 59-5150, Miami, Florida 33159, USA.

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Merry Christmas

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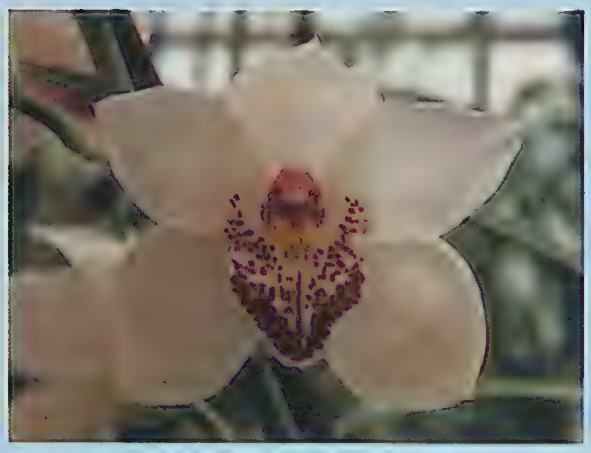
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Reclassification of the Genus *Judicius*

STANDER INNASENT

An extract from that authoritive botanical luminary, the Manly-Warringah Orchid Society Bulletin.

Judges of orchids belong to an uncommon but relatively important family, the Judiciaceae which comprises a number of Tribes including Lawseae, Horticulteae and Equineae.

The classification of the Family is based largely on their environment and behaviour patterns as morphologically they are similar, although some members of the Tribe Equineae are reported to have a broadened posterior and bowed lower limbs. Orchid judges are part of the Subtribe Orchidinae of Tribe Horticulteae that contains a single genus *Judicius*.

The majority of workers consider that all specimens of the genus belong to a single species, *holyi*. *Judicius holyi* is normally widely scattered but at certain times of the year is seen to congregate in groups, especially in winter and spring in the vicinity of suburban shopping centres. An increasing number of workers suggest that the species should be sub-divided into a sub-species *inferiormental*, comprising those exhibiting symptoms indicating lack of vision and intelligence. However, the author's study has shown that a judge may at one time exhibit the symptons but later show great vision and wisdom, so that the suggested subspecies is hardly valid.

Detailed study of the genus *Judicius* has revealed two distinct behaviour patterns considered sufficiently important to warrant division of the genus into two species.

Judicius groupiei (sp. nov.) As the name implies they tend to congregate into small flocks, usually containing three to six numbers, which flit from plant to plant engaging in generally subdued conversation with occasional bursts of raised voices. Vocabulary is surprisingly colourful but the most commonly heard remarks are "That's the one to beat" and "That one's a bit past it" (this latter remark was definitely shown to refer to an orchid, not a fellow judge). At district shows only one group may be present but at OS NSW Shows there are dazzling scenes as many groups dash from display to display like flocks of starlings, muttering and pointing.

Judicius unitii (sp. nov.) A solitary species and much rarer than *J. groupiei*. It can only be found at OS NSW shows or the equivalent in other States. It is a solitary beast with consequently limited vocabulary, and on being questioned invariably replies "Quality". Little faith should be placed on this reply, however, as it is believed to be some kind of status symbol. *J. unitii* is much less active than *J. groupiei* and usually found standing in front of a display staring vacantly into the middle.

Both species can be cultivated with great care and further research into cultural requirements could be rewarding.

Comment

In view of the importance of the above determinations AOR sought comments from an authority as equally qualified as S. Innasent and was fortunate in finding Ima Picker and cajoling him into sparing time from work on his opus *The sex life of the Drosera* to comment, as below.

Like all other great steps forward in classification this one is bound to cause controversy. The lumpers and the splitters will fight over it for decades. Is the species sufficiently homologous to be monotypic or are the two types sufficiently distinct to warrant division?

What of the variety *associatii?* Some regard clones of this variety as definitely inferior forms doomed forever to wander aimlessly outside the evolutionary process. Metamorphosis, however does occasionally take place, affording the only instances in orchidology where a grublike type emerges into full florescence. Here again controversy can arise regarding the beauty of the florescence. This does not occur with feminine clones.

This brings up the fact, overlooked by Innasent, that the genus is similar in this respect to such genera as *Cycnoches* and the section Orthocatasetum in *Catasetum*.

Being diploids the genus is hard to distinguish from clones of allied orchidological types when outside its natural environment. Disappointed losers have been known to say that clones of the genus may be recognised by their cerebral callus and that fossilised forms may exist.

Additional morphological data reveals that most are glabrous around the labellum, rarely hirsute, although tomentose forms are not unknown. In general most are too old to be pubescent.

An ecological study shows that the genus is rarely found outside glasshouses, shadehouses, and pot houses.

Innasent fails in omitting the Latin description essential to all determinations. To remedy that dereliction:-

Judicius groupeie (sp. nov.) Id genus omme forti et fideli nihil difficile et humanum est errane. In magnis et voluisae sat est. Intega vitae, virtute involvo.

Judicius unitii (sp. nov.). Infirma species barba tenus tenus sapientes alteram partem suggestio falsi non omnia possumas ommes. Human est errane incidis in Scyllam cupiens vitare Charybdim. Joci causa.

Correct use of Maxicrop® is beneficial

In the June issue of *AOR* Mr. Bill Johnson warned of instances where excessive use of iodine trace elements could cause symptoms similar to virus in orchids.

The key word is excessive because in the correct amount iodine is not only beneficial but possibly essential.

The essence of Mr. Johnson's *A simple nutritional programme for orchids* is the use of all nutrients in correct proportions, and the fact that these proportions will be less with cattleyas than with cymbidiums.

Naturally the distributors of Maxicrop are anxious that the matter of correct proportion may not have been emphasised enough.

To allay any doubts on the part of readers two relevant letters are published. Note that Mr. Johnson fully concurs with what is said about iodine.

To benefit from the use of Maxicrop and other fertilisers it is recommended you send for a copy of Mr. Johnson's paper. Further details regarding it are printed in this issue.

The Editor.

Some time ago one of our distributors contacted us regarding the concern being expressed by some of his orchid grower clients re the safety of Maxicrop on orchids. The concern was apparently generated by the comments on p109 of the June 1982 AOR.

Unfortunately we had not been aware of Mr. Johnson's work until that time. So to clarify the matters raised in the report I recently visited Mr. Johnson. On the basis of our discussions I wrote the attached letter to our distributor, and forwarded a copy to Mr. Johnson. Mr. Johnson feels the letter "summed up the situation nicely" and suggested that I forward a copy to you.

The matters raised are of considerable interest to us, since Maxicrop has enjoyed great popularity among orchid growers for many years, and used wisely, we believe that it will continue to be used to the benefit of the orchid growing industry.

Yours faithfully,
Peter Abetz, B.Agric. Sci. (Hons.) M.A.I.A.S.
Technical Advisor

To our agent,
Dear Sir,

Thank you for bringing to our attention the concern of orchid growers regarding the information published in the *Australian Orchid Review* (June 1982) concerning the work done by Mr. W.R. Johnson with Maxicrop on orchids.

To clarify the matters raised in the report, I recently visited Mr. Johnson, who kindly gave me a copy of his paper entitled "A Simple Liquid Nutritional Program for Orchids" on which the article in the Australian Orchid Review was based.

Mr. Johnson informed me that when he fed Maxicrop at monthly intervals, none of the virus like symptoms appeared, and that the monthly applications actually improved the foliage colour, by supplying the orchids with the necessary element iodine.

The problem referred to in the *Australian Orchid Review* article appears to occur mainly in some cymbidium plants when watered with Maxicrop weekly, and Mr. Johnson therefore writes in his paper that "Maxicrop . . . if used *incorrectly*, would be dangerous to *some* orchid genera" (emphasis mine).

Mr. Johnson has shown by "in vitro" experiments that using 2.232ml Maxicrop/1 (which is more than double the recommended rate for orchids) can induce the virus like symptoms. I therefore believe that it is important for growers not to exceed the recommended rate of 1:1000 (that is 1ml/1) for orchids, and I believe that this rate applied every 14 days is safe. However, in the light of the observation that Cymbidiums appear to be more susceptible to the virus like symptoms described by Mr. Johnson, care should be taken that the rate of 1:1000 is not exceeded for this genus. Should any plants develop the symptoms, Mr. Johnson advises withholding Maxicrop and increasing the iron and magnesium levels for several weeks, until the symptoms disappear. Thereafter Maxicrop can again be applied, but preferably at less frequent intervals.

The Dilution rate we recommend for orchids is 1:1000, and this supplies the orchids with 1ppm of iodine — the ideal level for iodine according to Mr. Johnson's research. Mr. Johnson has established beyond doubt that orchids need iodine, and Maxicrop is the *only* readily available fertilizer that contains this essential element, and this is no doubt why Maxicrop has become so widely used by orchid growers over the past 10 years with good results.

We would also like to point out that Maxicrop is not a "complete" fertilizer for orchids, as the major elements are present in rather small amounts. These should therefore be provided from other sources, or the grower may wish to use Maxicrop Indoor Plant Food, which contains additional NPK, giving 11ppm N, 4.3ppm P and 12ppm K when used at the recommended rate of 1:1000. Used at that rate, it will also supply the orchid with close to the ideal level of iodine.

Every orchid needs iodine. Maxicrop is the *only* readily available fertilizer to contain this element, and when used as directed supplies this element at the *ideal* level for orchids. So the question is, which orchid grower can afford not to use Maxicrop?

Yours faithfully,
Peter Abetz B.Agr.Sci. (Hons.) M.A.I.A.S.

"As soon as the three Orchidian forms *Monachanthus, Myanthus* and *Catasetum*, which had previously been ranked as three distinct genera, were known to be sometimes produced on the same plant, they were immediately considered as varieties, and now I have been able to show that they are the male, female and hermaphrodite forms of the same species."

Darwin in Origin of Species.

This Year's Show of Shows

An Australian Orchid Conference Show must rank as one of the great orchid shows of the world.

This seventh one was notable for superb organisation, as well as for the coming together of the finest orchids in Australasia and Asia.

Elsewhere in this issue you may read a New Zealander's impression of this show and Queenslanders' hospitality.

Mr. Kevin McFarlane of Cairns was thrilled by his Grand Champion win with *Phalaenopsis* Abendrot. Mr. McFarlane has been a leader in phalaenopsis breeding in Australia and has several times achieved reserve champion with a phallie or dendrobe, but this was his first grand champion. The stem had eight flowers and five buds, the flowers about 13cm wide, flat, and with overlapping segments, each a deep rose and white edged.

Reserve Champion was the truly regal *Lycaste* Macama 'Doris May', AM/AOS, shown by Mr. and Mrs Fred Alcorn.

The long rows of displays in the spacious Greek Community Centre were gracefully curved, a device which stopped them from merging too much into one another. Nearly all Queensland affiliated societies were represented as well as each State Society. In addition there were wonderful displays from the New Zealand Whangarei and Taranaki orchid societies; one by Professor Rapee Sagarik of Thailand; from the Orchid Society of Papua New Guinea; the Orchid Society of the Northern Territory; and from the Yokohama Orchid Society of Japan.

Major Australian orchid nurseries also had displays, as did many leading growers.

Each display was aesthetically pleasing, and each had a share of prize winners. A description of each could take all our space but the list of champions below conveys its own pictures.

If one display can be picked out for mention it must be the glorious array of softcane dendrobiums shown by Harry Spence of Tamborine Mountain. It was awarded the prize for most pre-eminent entry. Over sixty plants had two to four canes about 60cm high just covered in flowers from pot top to top of stem. The colour range was staggering. Most had Japanese sap lines, and some Harry had bred himself.

The native section filled one end of the hall and it included some fine specimen plants. The champion would have to be the finest *Dendrobium striolatum* in captivity.

Floral art was a very strong section and entries were of a high standard.

THE CHAMPIONS

Grand Champion Orchid of the Show: $200 Trophy donated by ANZ Bank and Warana. K. McFarlane — *Phal.* Abendrot.

Reserve Champion Orchid: $75 Trophy donated by ARC Engineering. Mr. and Mrs F. Alcorn —*Lycaste* Macama 'Doris May', AM/AOS.

Champion Specimen — Exotic Orchid: $50 Trophy donated by ANZ Bank and Warana. O. Granger — *C. skinneri* 'Alba'.

Champion Specimen — Native Orchid: $50 Trophy donated by Victoria Orchid Club. R. Dallman — *D. kingianum.*

Champion of the Novice Section: $50 Trophy donated by F.J. Slattery. F. Lenz — *V.* Sarojini.

Most Pre-eminent Entry: AOC Certificate and Medallion and $100 Trophy donated by ARC Engineering. Display by Harry Spence.

Champion Cattleya: $30 Trophy donated by Aranbeem Orchids. O.V. Granger — *C.* Princess Bells.

Champion Cymbidium: $50 Trophy donated by Valley Orchids. G. & D. Bloodworth — *Cym.* Burgundian 'Bexley'.

Champion Miniature Cymbidium: $50 Trophy donated by Valley Orchids. B. Ledez — *Cym.* Fuss.

Champion Novelty Cymbidium: $50 Trophy donated by Orchid Club of South Australia. I. Burness — *Cym.* Ivy Fung 'Radiance'.

Champion Dendrobium: $30 Trophy donated by W. Lobley. B.C. Saunders. *D.* Hosinusune Hamine.

Champion Native Orchid: $50 Trophy donated by The Orchid Society of Western Australia Inc. T. and B. Gregory — *D. striolatum.*

Champion Oncidiinae: $50 Trophy donated by Tasmanian Orchid Society. Barry Paget — *Onc.* Phyllis Hetfield x Frolic.

Champion Paphiopedilum: $30 Trophy donated by Orchidglen Nursery. Mackinneys Nursery — *Paph.* Helleas Westonbirt x Margaret Brandios.

Champion Phalaenopsis: $30 Trophy donated by Brisbane Orchid Society. K. McFarlane — *Phal.* Abendrot.

Champion Vandaceous Orchid: $30 Trophy donated by Orchidworld Nursery. G. Williams — *Opst.* Lannathai x Rhy. gigantea.

Champion Exotic Species: $30 Trophy donated by Orchid Species Society. O. Granger — *C. skinneri* 'Alba'.

Champion any other orchid: $30 Trophy donated by Belvedere Orchids. Mr. and Mrs F. Alcorn — *Lycaste* Macama 'Doris May', AM/AOS.

SOCIETY DISPLAYS

Interstate or Overseas Society

1st $100 ARC Engineering Trophy — Whangarei Orchid Society of NZ.
2nd $ 60 Peter's Glen Trophy — Orchid Society of NSW.
3rd $ 40 Peter's Glen Trophy — Orchid Society of NT.

Q'LAND AFFILIATED SOCIETY—METROP.—2.5 M. SQ.

1st ANZ Bank and Warana Trophy.
Redcliffe OS and North Albert District OS.
3rd $40 QOS Trophy. Eastern District Orchid Society.

Q'LAND AFFILIATED SOCIETY—METROP.—1.5 M. SQ.

1st $80 Trophy donated by Peter's Glen: North Brisbane OS.

Q'LAND AFFILIATED SOCIETY—COUNTRY—2 M. SQ.

1st $80 ANZ Bank and Warana Trophy – Sunshine Coast OS.
2nd $50 QOS Trophy – Tweed District OS.
3rd $30 QOS Trophy – Toowoomba OS.

GROUP DISPLAYS

Best Display by an individual grower (inc. family membership):

1st $30 ANZ Bank and Warana Trophy – Mr. & Mrs F. Williams.
2nd $20 ANZ Bank and Warana Trophy – D. Hampton.
3rd $15 ANZ Bank and Warana Trophy – K. McFarlane.

BEST DISPLAY BY A COMMERCIAL GROWER

1st Mackinneys Nursery.
2nd Florafest Nursery.
3rd Sunshine Nursery.

ASPLEY OS SPRING SHOW

Champion orchid was Mr. Brent Ledez's *Cymbidium* Fuss (= Mimi x Carisona). A remarkable *Dendrobium linguiforme*, grown by Mr. Leney Smith won awards of Reserve Champion, Champion Specimen, and Most Pre-eminent Entry. Champion species was *Ludisia discolor* grown by Mr. L. Goodwin.

DARLING DOWNS ORCHID ASSOCIATION

The Association celebrated their tenth anniversary spring show at Eager's Showroom. Grand champion was *Cymbidium* San Franciso 'Meadow Mist', owned by Leon Young. Reserve went to a fine plant of *Paphiopedilum* Maudiae 'Magnificum', belonging to Murray and Kath Ferguson.

Champion specimen was a fine plant of *Sarcochilus hartmannii* owned by Leon Young. Champion species, *Dendrobium crepidatum*, was grown by Des and Sue Stone.

NORTH BRISBANE ORCHID SOCIETY

The Spring Show took place at Toombul Shoppingtown. *Cymbidium* Highland Mist 'Lalchere', exhibited by L. Elder, was champion. Champion specimen was J. Ryan's *Cymbidium* Pee Wee, a cross between *C. madidum* and *C. pumilum* which is seldom seen at shows.

Mr. E. Manly's *Dendrobium linguiforme* as champion native proved again that with skill this species can be grown to heroic status.

Most successful exhibitor went to D. Rollason.

NORTH COAST OS

This is a prestige show in which all societies of the Sub-Tropical Orchid Council exhibit. These displays were won by Sunshine Coast OS, first; Maroochydore, second; and North Coast OS, third. Visitors came from England, Tasmania, and West Australia, ACT and North Queensland, and points in between.

Champion was a cattleya cross between *Bc.* Mount Hood and *Blc.* Sylvia Fry, owned by Mr. and Mrs K. Gowlett. Reserve went to a species belonging to Mr. G. Yong Gee, *Paphiopedilum urbanianum*, a Philippine orchid discovered only a few years ago.

Dendrobium White King earned the most pre-eminent award for Mr. Aub Coombs.

TOOWOOMBA OS SPRING SHOW

This is one of the highlights of the Festival of Flowers. It is certainly Queensland's best cymbidium oriented show, and due to the participation of the local ANOS group it is also strong on natives.

Show champion was Cymbidium Fort William 'Hamsey', grown by Mr. and Mrs G. Vettiger. Reserve went to *Paphiopedilum* Novisphere 'Braeburn', the previous possession of Mr. and Mrs. N. Douglas. Champion native was a *Den.* Bardo Rose grown by Mr. and Mrs D. Ratcliffe. Mr. N. Simpson's *Cym.* Pearl Balkis 'Chailey', won the novice championship.

ROCKHAMPTON SPRING ORCHID SPECTACULAR

Visitors came from all parts of Australia and some from the USA and were rewarded by a quality show. Grand champion was *Dendrobium* Yukidaruma 'King', belonging to Ken and Beryl McDonald. The same plant was also champion at the Capricorn Orchid and Foliage Club Spring Show.

A special commendation was awarded to *Bc.* Cavan Charm (registration applied for) for "Outstanding colour combination in an orchid locally bred". Clones in this cross have nearly all proved splashed petals. Parentage is (*Bc.* Junavoir x *C.* Bob Betts) x *C.* Pine Rivers.

IPSWICH OS SPRING SHOW

A financial and social success. Champion orchid was a clone from the cross *Vandopsis gigantea* x *Rhynchostylis gigantea*, grown by Mr. and Mrs F. Rudolf. Reserve was Mr. and Mrs L. Heinemann's *Paphiopedilum venustum.*

Victorian Orchid Club

Time is often vital when entering a plant for judging. What is a sure winner this week will be a little jaded next week. This was demonstrated at the VOC show where the show champion and reserve champion were the same cymbidiums that held the two top places at the Melbourne Eastern OS show, but in reverse.

Here Mr. Bob Hodgins triumphed with his *C.* Levis Duke 'Bella Vista', and the reserve went to Mr. Les Vines and his wife with their *C.* Narella 'Jennifer Gail'.

The affiliated society award was won by Melbourne Eastern. Mr. V. Trotman won the Ira Butler award with a fine plant of Dendrobium Specio-Kingianum. Most pre-eminent entry, carrying with it the AOC trophy was won by Mr. and Mrs C. Karamitzios for their splendid *Dendrobium* Sunburst 'Elizabeth Ann'. A big thrill for these novice growers.

A very wide range of classes catered for all the horticultural genera and prizes were well distributed.

GIPPSLAND ORCHID CLUB

The Club held its very first show this year, the venue being a church hall at Traralgon. The severe winter raised doubts whether there would be sufficient blooms, but members rallied to achieve a very creditable effort for a first show by a small club.

Standard and miniature cymbidiums pre-dominated, and there was an attractive display of natives. Variety was added by small groups of cattleyas, paphiopedilums and other genera.

Cymbidium Mary Ann 'Simplicity', owned by G. Fabris, was champion, and a specimen plant of *Dendrobium* Bardo Rose, entered by N. Williams, was reserve champion. Mr. and Mrs P. Manicola received the VOC Trophy as most successful exhibitors.

MAROONDAH OS SPRING SHOW

This was an aesthetically pleasing show. The centre of the Vermont High School Hall was a spectacular mound of orchids, complete with rocks, waterfall and greenery. Other displays lined the walls.

Show champion, owned by Mr. and Mrs J. Walker, was *Cattleya* Bob Betts 'Goliath'. This is only to be expected of a well grown Bob Betts, however the reserve champion was a real surprise, namely Mr. Bert Cusack's *Dendrobium linguiforme*. It was superbly grown and flowered, the mass of white flowers almost hiding the leaves.

Champion cymbidium was Mr. and Mrs Ian Whitcombe's C. Eastern Star 'Sunburst'. This cross is the latest generation of a breeding programme initiated by Ian. It started with his crossing of Sleeping Beauty 'Sarah Jean' with Claudona 'Rajah' to produce C. Sleeping Spring. A selected seedling from this was crossed with Sensation 'Vieux Rose' to obtain the shapely rainbow coloured C. Dawn of Hope. A clone of the latter crossed with Wyanga 'Elanora' produced C. Eastern Star. C. Dawn of Hope and C. Jubilation are regarded as the two most significant crosses produced in Victoria.

Mr. D. Weise must have been very proud of his flowering of *Cymbidium* Clarisse Carlton 'Cooksbridge' judged the best novice entry.

RINGWOOD OS SPRING SHOW

This show had to be seen to be believed — it was "blooming" marvellous.

Despite opposition from Melbourne's fickle weather, with near summer heat in winter followed by devastating frosts which ruined hundreds of choice spikes, even in glasshouses. However members rallied well and created a total of 25 display stands in the malls of Ringwood's Eastland Shopping Centre.

Amidst a rainbow of colour from "Orchids in the Eighties" Kevin Heinz, "Mr. Sow What" of television, opened the show and expressed his appreciation of the Ringwood Orchid Society's assistance in raising $1,000 Peter McCallum (Kevin Heinz Cancer Research Fund).

Local traders gave substantial support enabling 77 classes of orchids to be exhibited and judged. Judging took four hours.

The public showed their appreciation by attending in large numbers.

Bert and Mary Smith won the Pre-Eminent Orchid Award with *Anglocaste* Olympus, beautifully flowered with seven heavily textured, glistening white flowers. They also won champion cymbidium with C. Sally Alexander 'Colmaurin', a beautiful plant, and capped it by winning champion display of the show for which the prize was a Greyhound trip for two.

Best display incorporating a theme "Tea House of the Orchid Moon" was won by B. and S. Collectt. They showed a setting of the traditional Japanese ceremony in the Tea House.

Due to the popularity and high standard of flowers and displays the Eastland Shopping Centre management suggested the show be staged for another two weeks. A tempting offer. Maybe next year.

Keith Duffield

MELBOURNE EASTERN OS

This Show at Chadstone Shopping Centre is always one of the great occasions of the Melbourne Spring.

Grand champion was a shapely rich purple cattleya with even deeper colour in the lip with two well positioned blooms. Owned by Mr. and Mrs J. Brighton.

Champion cymbidium was the lovely pink C. Narella 'Jennifer Gail' belonging to Mr. L. Vines. Reserve champion went to Mr. Bob Hodgins' C. Levis Duke 'Bella Vista', a fine yellow.

Many displays were arranged by groups of top growers.

SUNRAYSIA ORCHID CLUB

Even at normal years Mildura is a dry area dependent on the waters of the Murray River for wealth from irrigation. This year rainfall to showtime in September was less than 25mm. None the less the Sunraysia OS put on a very creditable Spring Show.

Miniature cymbidiums predominated, indicating how suited they are to warm conditions. Thus the show champion was a C. Sarah Jean 'Barritta', grown by Dick Crozier. The best specimen was C. Bud March 'Rosetta' belonging to Vic Marr. It had six upright spikes and over 100 flowers.

C. pumilum 'Album' x C. Angela 'Viking', was judged the best miniature seedling. The standard cymbidium seedling prize went to C. Westmark x C. Sensation 'Vieux Rose'.

There was a good display of native orchids.

Spring at Roselands

The Orchid Society of NSW Spring Show at Roselands seemed more colourful than previous years. It seems that hybridisers are breeding more intense colours into all genera. Nevertheless it was the glorious white *Phalaenopsis* Alice Gloria which won the championship of the show for Mrs Melita Gulbis. And that wonderful coloured hybrid from way back *Cymbidium* Burgundian 'Sydney', which became reserve champion due to the careful grooming of Mr. J. Mata.

That fine grower Mr. W. Hughes was grower of the reserve champion cymbidium, *Cymbidium* Highland Mist 'Barrita'.

Mr. R. Burgess' *Dendrobium kingianun* was a well grown specimen of rosy flowers, just good enough on the day to beat Mr. E. Weback's famous plant.

Mr. R. Montgomery is too good a grower not to be among the top winners, and this time it was with champion cattleya, *Blc.* Ranger Six 'Aok'.

Champion paphiopedilum was another score for Mr. W. Hughes, with *P.* Kay Rinaman. *Cattleya aurantiaca*, owned by Mr. and Mrs J. Bygraves, is the reigning champion exotic species.

The best in seedlings is always a valuable guide to current trends and this year the best standard cymbidium was from a cross between Sussex Dawn 'Dorothy May' and Mem. Robert Casamajor 'Coerabina', grown by Mr.

T. Mullan. Second prize went to Mr. J. Gulbis' clone of Vieux Rose x Carriga. NSW also gives a prize to the best seedling other than cymbidium. Mr. K. Wilson's *Paphiopedilum* Picture 'Burraneer Bay', was first in this class, and Mrs I. Hartmann second with *Cattleya* Doretts.

North Shore O.S. proved once again just what a keen bunch of good growers they are by winning both the Affiliated societies display and the native display. In the former they narrowly defeated Parramatta, with Sutherland a worthy third. Eight other societies all had tasteful interpretations of the theme "Spirit of Spring". These societies were: Eastwood, Bankstown, Sydney, Cumberland, Berowra, Western Suburbs, Eastern Suburbs, and St. George. All had excellent aesthetic appeal, the difference in the marking coming mainly from the fact that they could not muster a full range of genera. This aspect, however, was better than in previous years because more growers are accepting the challenge of growing more genera.

The native displays have now been a feature of NSW shows for twenty years and this year they made their usual powerful patriotic impact. There were fewer of the new generation of native hybrids than expected, probably because of the late season, but enough to indicate interesting things for the future. North Shore came first, followed by Manly-Warringah, Bankstown, Sydney, Western Suburbs and Cumberland.

The decorative section was a delight. High praise to the artistry of the entrants. The winners were Mrs M. Laphos, Mrs M. Rollings, Mrs E. James, Mrs M. Nicoll, Mrs M. Davis. Many took several prizes. Special commendation is due to Mary Laphos for winning two championships.

PARRAMATTA OS SPRING SHOW

This attractive show was presented in the huge Westfield Shopping Centre at Parramatta, Australia's second oldest city. Mr. J. Mata scored a wonderful double, winning grand champion with his *Cymbidium* Highland Mist 'Dillabirra', and reserve champion with C. Lagoon 'Meta'.

Champion other orchid was won by Mr. and Mrs F. Alcorn with their beautiful *Lycaste* Koolena 'Elva'.

An interesting class was for best colour orchid. Mr. R. Miller won with *Cattleya* Rosemary Coonney, a name which does not appear to be registered.

Champion minicym went to Mr. W. Whiteford's C. Mimi 'Sacramenta', and champion novelty to C. Excalibur 'Galahad', belonging to Mr. and Mrs E. Pauley.

MANLY-WARRINGAH OS SHOW

The show opened to a packed house and kept that way. Grand champion was Mr. Tom Price's *Blc.* Sylvia Fry 'Supreme', a hard flower to beat when grown as well as this one.

Interest centred around the individual displays. Mr. Chris Arnott's consisted of many clones of *Dendrobium kingianum,* not only being attractive but indicating just what a variable species it is. Mr. Phil Spence can always be relied to present something unusual. This time it was a spectacular *Dendrobium spectabile* as the focal point of his display. Other displays were presented by Mr. and Mrs R. Petith, Viv Bester, Bob Friend and Gwen Olsen. A display by Messrs Roberts and Gallagher contained the winning specimen plant, *Cymbidium* Warrinya 'Kara Lee', also a magnificent *Dendrobium speciosum.*

Although one of the earliest of spring shows the natives were very prominent. No rain this winter has meant more light and hence earlier flowering.

The floral art judge remarked on the particularly high standard and pointed out that the wired work was as good as she had seen anywhere in Australia.

ILLAWARRA DISTRICT OS SPRING SHOW

This early spring show, held at the Warrawong Regional Shopping Centre was a triumph for a novice grower, Mrs Anne Franklin. Her Cymbidium Highland Mist 'Barrita' was a well deserved grand champion. Mrs Franklin also won the championship at the Corrimal OS show, and did well at the Sutherland and South Coast OS shows.

Reserve champion was Mr. J. Sharpe's *Cattleya* Pastoral 'Innocence', a name which is not registered.

CUMBERLAND OS

This NSW society show was held at Carlingford Court Shopping Centre. Mr. R. Deas' *Blc.* Sylvia Fry 'Supreme', was the grand champion. The same grower also took the reserve champion with his Cymbidium Cleo's Melody 'Eldorado'.

Champion native hybrid was won by Mr. K. Blackburn with his *Dendrobium* Eureka. This cross between *D. ruppianum* and *D. fleckeri* has been producing some particularly good clones.

Orchid Club of SA

This year's Spring Show was the magnificent spectacle the people of Adelaide expect and come to see in their thousands year after year. Once again it was successful in raising a substantial amount for St. John Ambulance.

Champion cymbidium of the show was Mr. and Mrs Mills' C. Highland Mist 'Dillabirra'. Most outstanding bloom other than cymbidium was a clone of the cross *Paphiopedilum venustum* x *P.* Goultenianum, owned by Mr. E. Whait. This was a very attractive flower and a breakaway from the conventional round show standard.

Mr. and Mrs Clifford won best dendrobium with *D.* Denyodogimi. Champion cattleya was C. Virtue 'Minna', from A. and K. Minne.

Johnston Orchids tabled the best pink phalaenopsis, a clone from the cross *P.* Zwingli x *P.* Fable. Best novelty phalaenopsis was also from a new cross, this time between *P.* Penang and *P.* Lady Ruby with the cultivar epithet 'Peppermint Candy'. Owned by G. and M. Hewitt.

A magnificent flowering of *Dendrobium linguiforme* dominated the native orchids at the Festival. It was shown by Mrs E. Auliciems and received a Cultural Certificate.

SOUTH COAST ORCHID CLUB OF SA

Twenty-one pleasing displays were entered in this Spring Show held at the Noarlunga Colonnades Shopping Centre. The sponsors were so pleased they increased the prize money.

An outstanding feature of the show was a plant of *Dendrobium delicatum* exhibited by Bernie and Lois

Hansen which was the reserve champion, and the ten AOC judges were unanimous in recommending it for a Cultural Certificate. Grand champion was *Cym.* Levis Duke 'Bella Vista', entered by Mr. and Mrs H. Lambert.

A magnificent specimen plant of *Cym.* Tommy 'Amy', carried 21 spikes. It was recommended for a Club Medallion. Owner: Colin Patten.

Harry and Bev Lambert won the trophy for most successful exhibitor, but by a very narrow margin from four others.

Spring in West Australia

The Orchid Society of WA held its Spring Show at Garden City, Booragoon. The high standard of the plants gave judges a difficult task.

The show proved a crowd pleaser, and addresses on the raffle tickets showed that many had travelled many kilometres to attend. There were also many visitors from other States and New Zealand.

Grand Champion was from the cross *Oncidium tigrinum* x *Odontioda* Salway 'Royal Red', registered as *Wilsonara* Salgrin, exhibited by John and Gloria Foley. Champion cymbidium was *C.* Balkis 'Captain Anderson', grown by E. and B. Beisley. Reserve went to V. and B. Studman's *C.* Wallara 'Gold Nugget'. The latter growers also won best cymbidium in the novice section with *C.* Narella 'Jennifer Gail'. Mr. and Mrs Studman were the most successful exhibitors in the novice section.

In the open division the most successful exhibitor was Mr. and Mrs L. Gale followed by Mr. and Mrs W. Janney. Two teams tied for third, Mr. and Mrs J. Coleman, and Mr. and Mrs W. Hall.

The floral art exhibits attracted much attention. Corsages were in great demand and the Ladies Auxiliary did a wonderul job of making them for sale.

OS OF WA WINTER SHOW

Held at Booragoon in July, the grand champion being *Cattleya* Malworth 'Orchidglade', exhibited by Mr. and Mrs W. Hall.

Champion paphiopedilum and best seedling was from a crossing of *P.* Novenka x *P.* Pacific Ocean belong to Mr. and Mrs Beisley. Reserve was *P.* Winston Churchill x *P.* Small World, shown by Mr. and Mrs Janney. Best novice was Dr. Bain's *P.* Mad Hatter.

Best cymbidium went to Mr. and Mrs Rex for *C.* Zuma Boyd x *C.* Sleeping Dream.

MELVILLE DISTRICT OS OF WA

This society held a winter show at the Myer store in Fremantle in August. Show champion was *Cymbidium* Babylon 'Castle Hill', x *C.* Camelot 'Tartar', grown by Mr. and Mrs L. Gale. Reserve champion was *Cymbidium* Arcadian 'Sunrise', owned by Mrs C. Morphett. Best novice plant was *Paphiopedilum* Mad Hatter 'Brecon'.

MELVILLE SPRING SHOW

The Rod Edinger Hall, Melville, was venue for the show. Top orchid was *Paphiopedilum* Gladys Read x *P.* Betty Conway, grown by Mr. and Mrs K. Rex. *C.* Highland Mist 'Dillabirra', proved itself once again as champion cymbidium due to the careful growing of Mr. and Mrs L. Gale. They also won best specimen with *Cymbidium* Joyce Duncan 'Susan Hughes', and best cattleya with *C.* Lunar Orbit.

Reserve champion cymbidium went to Mr. V. Studman's Narella 'Jennifer Gail'. Best cymbidium seedling was Mr. and Mrs E. Beidley's Pearl Balkis x Valley Flower. The outstanding paphiopedilum was Compass x Small World, grown by Mr. and Mrs H. Lodge.

BUNBURY ORCHID SOCIETY

Winter and Spring shows were held at the Bunbury Shopping Forum, making the mall a blaze of colour. Exhibits showed that members are continually upgrading their collections. This year the society has been celebrating its tenth birthday.

Champion of the winter show was a clone from the cross *Cymbidium* Wallara x Lunagard, grown by Mr. and Mrs W. Cruickshank. Reserve champion was *C.* Pelleas 'Monterey', owned by Mr. and Mrs J. A. Coleman.

Eight weeks later the spring show champion was *C.* Pearl Balkis 'Chailey', grown by Mr. and Mrs M. Davidson. This was the fourth successive win for this plant. Mr. and Mrs N. Martin showed the reserve champion, *C.* Levis Duke 'Bella Vista'.

This year has been a very interesting and successful one for the Society.

HIGHLIGHT OF YEAR AT BURNIE SHOW

The Orchid Society of North Western Tasmania combined with the Burnie Lapidary Club to create a crowd pleasing Spring Show.

The team of Gwen Smith and Otto Beetz won three of the four major prizes: Grand champion with *Cymbidium* Sea Gem 'Cooksbridge', Reserve with *Odontoglossum bictonience*, and most pre-emient entry with *Sarcochilus hartmannii*. Barry and Wanda Dudman won the prize for most outstanding display.

Gerald McCraith went there to judge and, with Mrs McCraith, spent two days demonstrating, selling and promoting the Society.

The birth of a society

A meeting of people interested in starting an orchid and associated plant society was held in the CWA Hall at Beaudesert on March 17th, 1982. It was decided at that meeting that there were enough people to form the Logan and Albert Orchid and Foliage Society.

Six months later from 17 members on that first night, the club now has 27 members. Meetings are held on the third Wednesday of every month and almost every meeting has 100 per cent attendance.

It was decided after six months to stage a display on September 18th and 19th in Beaudesert. The display featured a running waterfall surrounded by exotic plants, orchids and moss covered rocks. Many visitors from Brisbane and the Gold Coast visited the show and were quite impressed by the natural effect achieved.

Because of the success of the display and the enthusiasm of members, it was decided to hold two shows in 1983, one in Autumn and the other in Spring.

The Society members are fortunate they live in an area which gives them easy access to many areas in which orchids are growing naturally such as O'Reillys National Park, The Lost World, and Lamington National Park. The Society would also like to extend a warm welcome to visitors.

For enquiries phone (075) 41 1108. *I. & J. Dennis*

Australian Species Societies

There are now four orchid species societies in Australia.

Species growing is difficult because the environmental conditions for each species is different. Thus extra knowledge and skill is necessary to grow a wide collection successfully.

The species grower must be a student of geography and ecology. He must be able to understand and create a range of microclimates and adapt his plants to them. The rewards of accomplishment are correspondingly great.

Thus a society of species growers is bound to be mutually helpful through the exchange of experiences.

The first species society was formed in Brisbane in May 1981. Called *Orchid Species Society* it meets on the 3rd Monday of each month in the Mt. Cootha Botanic Gardens Auditorium. The secretary is Mrs P. Campbell, PO Box 485, Toowong, 4066.

Northern Rivers Species Orchid Society was formed about the same time. It meets at the Red Cross Rooms, Keen Street, Lismore, NSW. The secretary is Mrs Beryl Stephens, 129 Military Road, Lismore.

NSW species growers have discussed forming a society for some time, but Victorian growers proved a step ahead.

The Orchid Species Society of Victoria was formed in June this year. It meets at the Nunawading Horticultural Centre, 82 Jolimont Road, Forest Hill. In the new year the meeting night might be subject to change so first enquire from acting secretary, Julie Lander, Lot 58 South Avenue, Mt. Evelyn, 3796. Phone (03) 736 3298.

Already this society is producing an information packed journal under the capable editorship of Peter Adams.

The NSW society was formed about two months after Victoria. It meets at the Lavella Bowling Club, Northmead.

The name is *Orchid S.P.E.C.I.E.S. (Sydney).* The initials stand for Society for Propagation Enjoyment and Culture of Indigenous and Exotic Species.

For details of meeting night etc, contact the secretary Ralph Terbutt, 33 Joanna Street, South Penrith, 2750. Phone (047) 36 2230.

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Her Majesty was delighted with the beautiful scene, with its profusion of different orchids, which we, in Britain, admire all the more because they are so rare. She was also touched that you should have come on board so frequently, from the day that the Royal Yacht arrived with Prince Philip, in order to keep your expert arrangements in their first freshness.

At The Queen's command I pass to you her sincere thanks for your very kind gift of flowers.

Yours sincerely,
Peter Ashmore
Master of the Household

Note by Fred Oelkers: The magnificent display of orchid blooms on HMS Britannia could not have been possible without the co-operation and generosity of members of the Toowoomba Orchid Society, Hugh and Tess McClintock of Caloundra, Allan and Joyce Ryan of Chermside, Professor Rapee Sagarik, and myself. We feel honoured in having participated.

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Promise of huge, rich-coloured cyms similar to the one in the colour plate.

C 2092 — **SABRE DANCE 'HELLFIRE' x ALNWICK CASTLE 'DOVER HEIGHTS'**
Large, rich orange blooms possibility from this coupling.

C 2257 — **BEXLEY RADIANCE 'BEXLEY' x SABRE DANCE 'HELLFIRE'**
Very deep, pure reds from this hybrid.

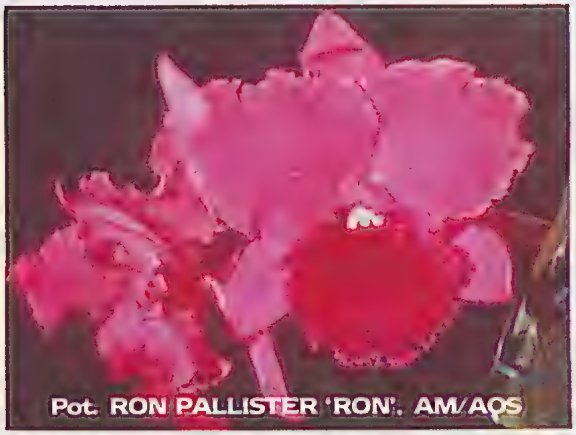
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C.4. **C. NAROOMA x C. KEW**
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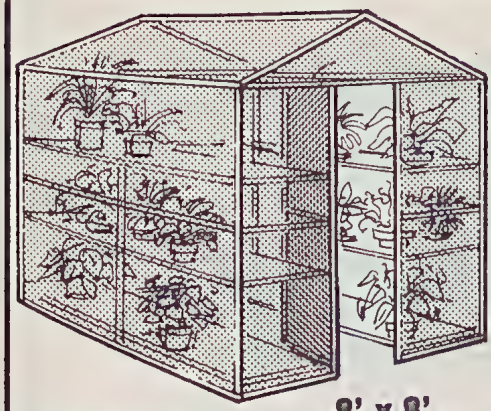
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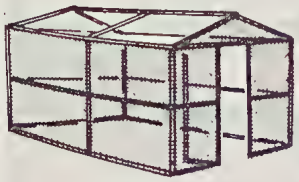


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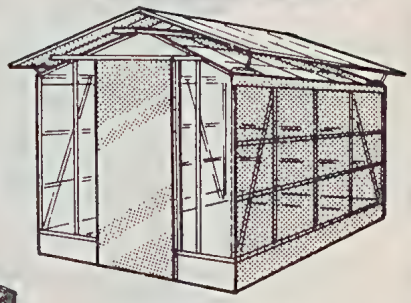
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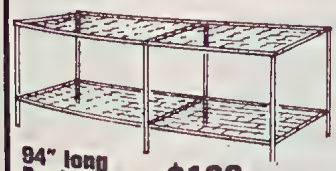
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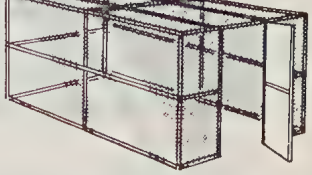
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Den. Andemos 'Mountain View', AM/AOS
Den. Peacock No. 1
Lc. Marie Ozzella 'Burgundy'
Pot. Fortune Teller 'Golden Morocco'
Slc. Vallezac 'Magic Fire', FCC/TOS
Blc. Dana Thomas 'Fong Yuen'
Blc. Greenwich 'Killarney', BM/JOGA
Den. Circe 'Gail', AM/AOS
Cym. Highland Mist 'Jayne', HCC/NSW
Cym. Clarise Carlton 'Toreador'

Our current list contains 120 different flasks comprising all genera. Send 27¢ stamp for copy.

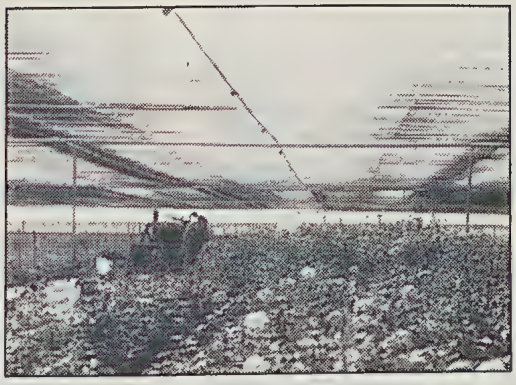
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SA01

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		Quantities	1	10	25	100
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V805	(3N)	VALYA CRAIG 'SUNSET' — August yellow	$10	$5	$3	$2
V809	(4N)	DOWNS DELIGHT 'VALENCIA' — July yellow	$10	$5	$3	$2
V828	(3N)	SEA CHANTY 'ROSETTA' — October green	$10	$5	$3	$2
V829	(4N)	BUD MARCH 'ROSETTA' — August yellow	$10	$5	$3	$2
V830	(4N)	SLEEPING GIANT 'TETRA GREEN' — August P.C. green	$12	$6	$4	$3
V832	(4N)	VALLEY PROMISE 'REYNELLA' — October white	$12	$6	$4	$3
V810	(2N)	VALLEY FLAME 'GLOWING EMBER' — June red	$12	$6	$4	$3
V831	(3N)	BURGUNDIAN 'CHATEAU' — September burgundy	$10	$5	$3	—
V902	(3N)	ROTHESAY 'BLACK LABEL' — September brown	$16	$8	$6	$4
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V905	(2N)	TERAMA 'ROBIN' — July red	$12	$6	$4	$3
V906	(2N)	SARAH JEAN 'CASCADE' — August green P.C. mini	$10	$5	$3	$2
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V909	(4N)	TALLY HO 'GREENOAKS' — September red	$12	$6	$4	$3
V910	(2N)	MIMI 'SACRAMENTO' — September brown mini	$12	$6	$4	$3
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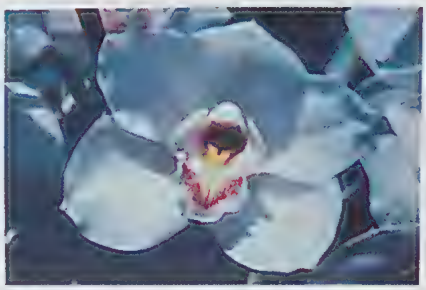
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March Quarter 1983
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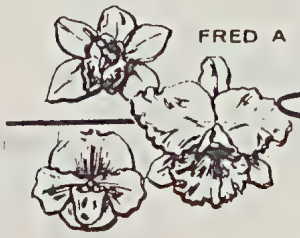
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Blc. Melinda Wheeler 'Halcyon' — *yellow, copper-red margins.*
Blc. Frances Miles 'Lovely', AM/AOS — *4 plants — green, burgundy lip.*
Blc. Malworth Slippers 'Britt', AM/AOS — *4 plants — golden yellow.*
Lc. Prism Palette 'Rainbows' — *4 plants — butterfly splashed.*
Blc. Fortune Teller 'Golden Morocco' — *brick-red on lime.*
Blc. Maitland 'Miles', AM/AOS — *deep yellow, red-purple lip.*
Lc. Chiou Jye Chen 'Jin Dind', AM/TOS — *butterfly splashed.*
Blc. Harlequin 'Act 1', AM/AOS — *reclined, yellow with fantastic lip.*
Blc. Golden Embers 'Chris', AM/AOS — *fine, large, golden yellow.*
Lc. Doc Stacy 'Tolio Tatong', AM/TOS — *orange-bronze, red lip.*

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Paph. Amanda Hill x World Venture 'Caringbah' — *red with spotting.*
Paph. Beaute 'The Grange' x World Leader — *honey-bronze, spotted.*
Paph. (Small World x Carfax) x Amanda 'Joyance' — *red and white.*
Paph. (Letozia x Amanda) x Picture 'Degas' — *red to bronze.*

SEEDLING CROSSES — 15 plant flasks — assorted genera

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Phal. Winter Maiden 'Dick Das' x Joseph Hampton 'Snowhite' — *exhibition.*
Phal. Modine 'Dicks Pride' x Ann Marie Beard — *good pinks.*
Phal. Misty Green No. 1 x amboinensis 'Malibu Gold' — *green to yellow.*
Phal. Karen Ann McFarlane x (Romantic x Marquise) — *pink stripes, red lips.*
Den. Doreen 'Kamiya' x D. Phalaenopsis Bicolor 'Splash' — *soft bicolors.*
Den. Wynnum Beauty x (Bushaba x Lady Hamilton) — *vigorous deep reds.*
Den. Hickam Deb 'Wallcrest' x Kristen Ann — *exhibition blood-reds.*
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Lc. Amberglow 'Magnificent' x Blc. Fortune 'Challenge' — *heavy substance yellows.*
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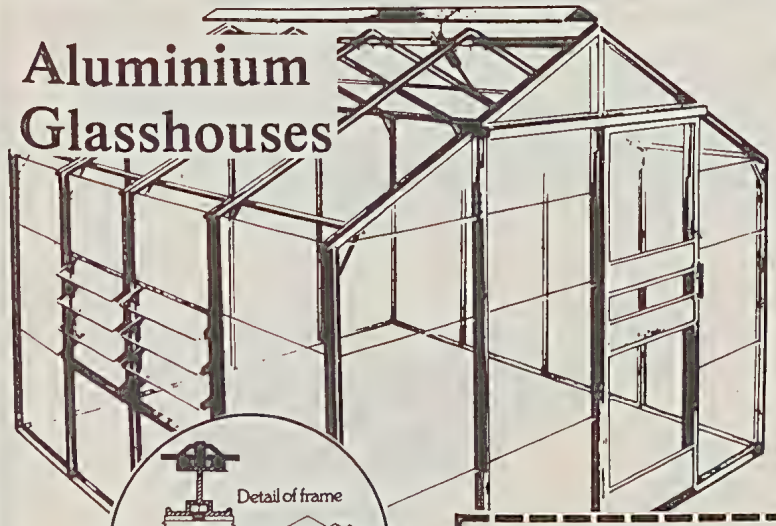
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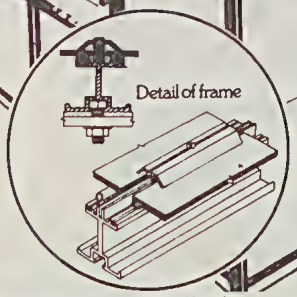
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Showy, large exhibition cattleya, light to darker shades of lavender.

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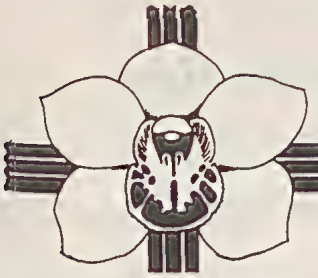
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VALLEY SONG 'MAUREEN'
VALLEY SUNSET 'ERNA'
*VALYA CRAIG 'SUTHERLAND'
VANGUARD 'CHRISTMAS BEAUTY'
VOLCANO 'MENEHUENE'
VOODOO 'GYPSY RED'
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HIGHLAND MIST 'JAYNE' — Beautiful September green — awarded	Plants	$10
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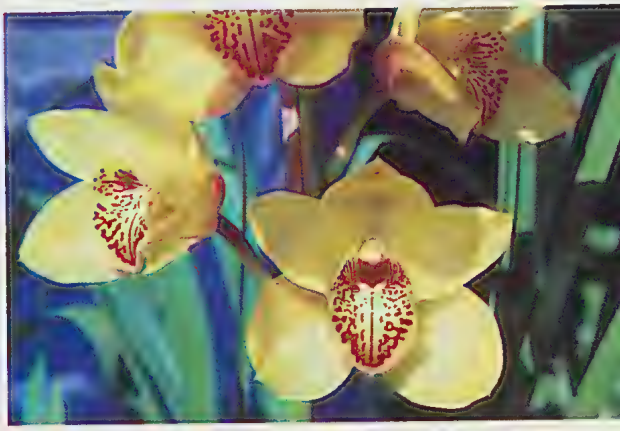
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AUSTRALIAN Orchid REVIEW

MARCH QUARTER
Vol. 48 No. 1

Printed and Published by:
GRAPHIC WORLD
14 McGill Street, Lewisham 2049
560 6166

- **Editorial Associates:**
QUEENSLAND: Mr Frank Oelkers, 419 Robinson Road, Geebung 4034.
VICTORIA: Mrs I. Hutchins, 37 Elliot Street, Mordialloc, Victoria 3195.
SOUTH AUSTRALIA: Mrs Joan McLean, 7 Clearview Crescent, Clearview 5085.
WESTERN AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154.
TASMANIA: Mr C. Nicholas, 7 Kelvin Avenue, Moonah, Tasmania 7009.
INTERNATIONAL: Mr G. H. Slade, Box 797, Vila, Vanuatu.
- **Editor: Ronald Kerr.**
- **Editorial Committee:**
R. KERR, G. HANSEN
A. B. PORTER
- **Address Editorial to:**
R. KERR, 260 Geoffrey Road Chittaway Point, NSW 2259 Phone: (043) 88 2605
- **Advertising, address to:**
ELIZABETH LOWE, 14 McGill Street, Lewisham, NSW 2049. Phone (02) 560 6166
- **SUBSCRIPTIONS.** 1983. Within Australia $14.00. Overseas surface $16.00 or $US18.50. Airmail rates on request.

TO JOIN AN ORCHID SOCIETY
Contact these secretaries:
NSW: Miss B. Oldfield, 61 Mountford Avenue, Guildford 2161.
QUEENSLAND: Mr W. Murphy, GPO Box 2002, Brisbane. Phone: 377 3253.
VICTORIA: Mrs I. Hutchins, 37 Elliot Street, Mordialloc, Victoria 3195.
SOUTH AUSTRALIA: Mr D. J. Harris, 36 East Avenue, Black Forest 5035. Phone: 297 7525.
WEST AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154. Phone: 330 2132.
TASMANIA: Mr J. F. Smith, 11 Warren Court, Howrah 7018. Phone: 44 1555.
NORTHERN TERRITORY: Mr A. McGregor, PO Box 38493, Winnellie 5789. Phone: 81 8436.

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Ascocenda Yip Sum Wah 'Magnetic', HCC/AOS ..... Cover

COVER STORY

Ascocenda Yip Sum Wah is one of the wonderful miniature plants in this grex which has gained an award. One parent, *Vanda* Pukele is a fifth-generation vanda in which *V. sanderiana* has been used twice in its ancestry, and *V. luzonica, V. coerulea* and *V. tricolor* once each. The other parent is *Ascocentrum curvifolium*, a lovely small-growing species which has cut the offspring down to a handy size. The cross was made in Hawaii by Mr T. Fukumura, and registered by Mr Yip Sum Wah of Penang, Malaysia, in 1965. The cross is widely distributed and has been remade several times. This clone was grown by Bill and Beryl Golding of Magnetic Orchids, Townsville. Plants like this will be at their best during the 8th Australian Orchid Conference this year.

Paphiopedilum Mericlone Project

Advanced Research at Flinders University

During 1982 Mrs Angela Cooper conducted experiments at Flinders University, South Australia, on the propagation of paphiopedilums by mericloning.

The results are substantial enough to indicate that continued research could be rewarding.

Propagation of paphiopedilums by means of excised meristems has not been successful anywhere because shoot apices have very low survival rates in tissue culture. Even should they survive they produce only a single plantlet with no lateral proliferation. This may be linked to the strong apical dominance apparent in this genus. Only after flowering does the plant produce a lateral growth. Thus commercial vegative propagation is slow and costly.

Mrs Cooper's research was along four main lines. She used whole plants and isolated meristematic regions under asceptic conditions on agar medium. No media modifications were used at this stage because the aim was to understand the behaviour of paphiopedilums under existing practices.

In four different types of experimental practice, each involving 90 plants, the success rate was low. However experiments using isolated shoot apices produced some promising results. Also it was demonstrated that plants rotated continuously on a clinostat produced more lateral growths. It appeared that the presence of green tissue may be essential for the development of shoot apices in culture.

At the end of eight weeks in culture apices which begun development started to die, probably indicating that the growth medium was unsuitable for mature development. A testing of various media likely to provide adequate nutritional and hormonal needs for explants is necessary.

Future research. It is intended now to focus work on excised shoot apices and isolated somatic cells. It is also necessary to carry out comparative studies on at least one other genus. To date solid media have been used and it is now intended to also try liquid cultures.

These experiments will be supplemented by cytological studies at the light and electron microscope levels with paphiopedilum and other genera.

Appeal for funds. Publication of the English edition of Schlechter has left the Australian Orchid Foundation short of ready cash. Therefore an urgent appeal for funds to keep this paphiopedilum project going is made. $5,000 will be needed in 1983 to supplement the university grant.

The Foundation pleas for the support of all orchid societies, nurserymen and individuals.

Societies, please organise competitions, plant sales, social functions and grants from funds in order to keep this project alive. Success will lower the cost of quality paphiopedilums.

Orchid nurseries supporting the fund will receive advance information on results.

The Foundation target is $5,000! What is your society's target: $250? $500? More?

Nurserymen, how much is a method of mericloning paphiopedilums worth to you? Especially should you be one of the first in the field.

This is a project capable of building Australia's image even higher in the orchid world. Be in it.

●

AUTUMN SHOW DATES

Queensland Orchid Society. Kelvin Grove High School, April 15 and 16. Set up 14th. Spring Show September 23-24-25. Set up 22nd. Hon Sec Mr Wal Murphy, GPO Box 2002, Brisbane 4001.

Brisbane Orchid Society. Charity Show. Sat, April 9, 9 to 9, Sun 10th, 9 to 5, Zupp's Motor Showroom, 1310 Logan Road, Mt Gravatt. Sec: Mr Ian McCallum, PO Box 94, Stone's Corner 5121. In aid of School for Deaf.

Ipswich Orchid Society. RSL Club, North Ipswich, April 15-16-17. Sec: Mr K. Imhoff, 10 Cramp Street, Goodna, Queensland 4300. Phone 288 4877.

Sunshine Coast Orchid Society. Annual Show. Civic Cultural Centre, Minchinton Street, Caloundra, from Thursday 7th to Saturday, April 9. Mini Spring Show. Same venue, Friday, September 30 and Saturday, October 1. Sec: Miss A. Hall, PO Box 279, Caloundra 4551.

Townsville Orchid and Allied Plants Society. Autumn Show, April 28-29-30. Spring Show October 20-21-22. For details contact Mr G. Neilson, phone 75 1511 after hours. Meets 3rd Tuesday, OES Hall, Ingham Road.

City of Lismore Orchid Society. Autumn Show. Lismore City Hall, May 9-10-11, 1983. A fine show for hardcane dendrobiums. Featured will be the Northern Rivers Champion Dendrobium. The Annual Spring Exhibition will take place from September 12 to 15, in the Cedar Room at the City Hall. It will be held in conjunction with the month-long Septemberfest celebrations, a period crammed with interesting activities. Recommended. Hon Sec: Mr Jim Hartley, 3 Crown Lane, South Lismore, NSW 2480. Meets 3rd Tuesday, Red Cross Rooms, Keen Street.

MARYBOROUGH MEETING PLACE

Maryborough Orchid Society meets on the second Tuesday of each month in the TPI Hall at north end of Sussex Street. Secretary is Mrs J. Skyring, 190 Fort Street, Maryborough. Phone 21 6217.

A Layman's Look at Genetic Engineering and Orchids

RONALD KERR

Orchids have been closely associated with pioneering methods of propagation.

Asymbiotic orchid seedling culture was the brainchild of Dr Lewis Knudson over sixty years ago. Since then the technique has been widely applied to other plants.

In vitro seedling culture is not usually considered to be genetic engineering but it did enable large populations of orchids to be raised from the one mating. As one result there were more chance tetraploids, that is plants with twice the number of chromosomes in each cell.

Tetraploids usually had very desirable flowers. This was a powerful incentive for experimenters to try and induce more tetraploids.

Success was announced at the Fifth World Orchid Conference in 1966 by Wimber and Van Cott, using the mitotic poison colchicine as a mutagen. The technique was quickly adopted by orchid nurseries.

Colchicine alters the normal spindle function within the cell when chromosome separation takes place. This prevents new cell walls from forming before another set of chromosomes start replicating and the new wall embraces in one cell the number of chromosomes normally carried in two cells. In active growth cell division is taking place all the time. Plant chromosomes are normally in sets of two and the usual number in a plant cell is designated the 2N number. When chromosomes double to form new cells the process is known as mitosis. Before fertilisation takes place the specialised egg and sperm cells have shed half of each chromosome, and the sets from each parent unite on fertilisation to form a new individual. This is known as meiosis.

Colchicine may induce a percentage of 4N or other polyploids per flask in both seedlings and mericlones.

These procedures have advanced orchid horticulture enormously by enabling mass production of improved strains at reasonable prices. They do not involve conscious control of the genetic structure of the plant cell.

Since the discovery of the role of deoxyribonucleic acid, DNA for short, as the controlling factor in cell growth, laboratory and industrial methods of altering the cell structure of living organisms, hopefully to obtain improved clones, has become reality.

Some of these techniques could have applications for orchids.

The basis of genetic engineering. The number of chromosomes in a cell varies between genera and sometimes species within a genus. The number in a cell can be determined fairly easily by staining the squashed cells and examining them under a light microscope. The chromosomes appear as minute blobs and can be counted. Under greater magnification and when mature they may appear to be H-shaped.

Under the greatly-increased magnification of the electron microscope (up to 750,000 times) it becomes apparent that on mitosis they carry out a cycle of growth and division. They become threadlike, double, and the two groups polarise at opposite ends of the cell separated by a spindle-like bundle of fibres.

Even the electron microscope cannot perceive all details of the intricate structure of a molecule. The instrument which has come closest to achieving this is x-ray diffraction photography. Briefly, this means bombarding a crystal of the substance with the very shortwave x-rays so that scattered rays from the crystal fall on a photographic plate. By taking thousands of such photos from different angles sufficient data emerges to give an idea of the molecular structure.

Dr Maurice Wilkins of King's College, London, and his associate Rosilind Franklin, took the x-ray diffraction photos which helped Dr Francis Crick and Dr James Watson determine the structure of DNA.

$50,000 PRIZE

The Eric E. Young somatic hybrid orchid prize. At the October 1981 Annual General Meeting of the American Orchid Society the chairman of the AOS Fund for Education and Research announced that a prize of $50,000 was offered for the first creation of a somatic orchid hybrid.

Somatic hybridisation involves bypassing the usual sexual process by inducing a fusion of non-sexual cells from each plant. The object is to create matings not now possible by normal pollination.

To those not familiar with recent developments in genetic manipulation the idea may sound fanciful. How close are plant scientists to achieving such hybrids?

Well it has been done. Not with orchids yet, but success with orchids is eventually possible. To clue you on what is happening here is a summary of the field of genetic engineering.

For full details of this prize write to: The Chairman, AOS Fund for Education and Research Inc, 215 Lake Hill Road, Burnt Hills, New York 12027, USA.

Living organisms require a constant flow of molecules in and out of each cell and DNA is the master ribbon of molecules in each cell nucleus which controls these movements. It has the unique property of replicating itself.

Years ago I read James Watson's book *The Double Helix* and found it as absorbing as a detective story — indeed it is one. Because all modern books on botany are centred around DNA I recently read it again.

The book is as dramatic as the importance of its subject, and strikingly reveals the personalities involved. In the flush of discovery Watson describes the DNA concept as "too pretty not to be true".

The DNA molecule is rolled tightly within the nucleus of the cell. The balance of the cell, known as the cytoplasm contains a number of units known as ribosomes which are the "factories" which assemble the molecules in absorbed food to make the amino acids which are the building blocks for proteins. There are other elements too, the most important being mitochondria, the power units of the cell.

A DNA molecule if unwound would stretch nearly two metres. It consists of a double helix: two spiral spines coiling each other. The spines are made up of alternating blocks of sugar and phosphate, and are connected by "rungs" made up from four chemical bases. These are adenine (A); thymine (T); guinine (G); and cytosine (C). A links chemically with T, and G with C, in accord with the laws of chemical affinity.

The grouping and sequence of rungs determines the programming for the making of new cells. The codes for triggering manufacture of the twenty amino acids are now known and various combinations and multiplications of them are the bases for the many thousands of different proteins in a living organism.

DNA cannot enter the cytoplasm but transfers parts of its code to "messenger" molecules of ribonucleic acid, RNA for short.

A gene is that part of a DNA molecule which specifies the synthesis of one protein. A messenger RNA carries half "rungs" called nucleotides in groups of three to form units known as codons. These unite in the cell to form three pairs of nucleotides which act as links for each amino acid in a protein. When all the amino acids for that protein are specified a code at the end of each gene signals stop.

The basic pattern in growth and replication of living organisms is that the genetic information is carried in the DNA, transmitted by the RNA molecule, and used in the production of proteins.

Arithmetically there can only be 64 combinations of codons, or triplets of A, T, G and C, to code the twenty amino acids which are the basic ingredients for thousands of different proteins. Three of the triplets are signals for stop, and some amino acids are activated by several different triplets.

Although the differences between plants and animals are very apparent it is worth noting that the codes for proteins common to both are the same.

Like DNA the RNA is composed of six chemical units and the two are almost identical, except that in RNA the chemical uricil replaces thymine. Also the sugar is ribose in RNA which has one more atom than the deoxyribose of DNA.

A new generation of electron microscopes is helping to make possible identification of the sequence of rungs in the DNA ladder. They are still too small for direct observation but by attaching the relatively-large atoms of uranium and thorium to two of the bases, C and A for instance, it is possible to deduce precisely where these bases occur in the DNA chain.

DNA is virtually a living computer with a data bank containing about half a million items for a bacterium and 5,000 million for a human being.

Mutations. The four bases are found along both spirals of the DNA helix. As the double spiral unzips to form a template for messenger RNA it gives off the bases in units of three called codons. For example the RNA "tape" may be programmed to make an enzyme by specifying the codes for the amino acids valine, isoleu, leucine and a stop signal. This would be coded CAT — TAG — GAT — ACT.

If, due to physical damage, radiation, or whatever, one item is missed or one added, a mutation takes place. Say the first C gets chopped off then the code would be transmitted ATT — AGG — ATA, and instead of the stop signal ACT CT? will emerge and the following protein may merge. Similarly a rogue A, C, T or G may fall into line and alter the message.

Most mutations of this type are minor and may not be noticeable. A few may cause death or injury, even congenital disease. A very few may result in an improved feature.

When the complete DNA structure for a species plant is known and computerised induced code deletions and additions of a desirable nature could be possible. Also greater knowledge of the rejection mechanism in a female cell could conceivably enable the code to be adjusted to accept the pollen of otherwise incompatible donors.

Fermentation. Because the living organisms involved are relatively simple to manipulate dramatic genetic engineering has been possible

at the bacterial level. Knowledge of the make-up of the DNA molecule has enabled industrial biologists to produce many new organic products and improve many of the old ones. Some of these processes take place in 100,000-litre fermentation tanks.

Fermentation in the production of food and drink has been used for thousands of years, mainly in such familiar products as wine, beer, cheese moulds and bread yeasts.

Technically, fermentation is the chemical transformation of organic compounds with the aid of enzymes. The word enzyme comes from the Greek: *en* meaning in, and *zyme* meaning yeast. An enzyme is a complex protein produced in living cells. Even in low concentrations it acts as a catalyst to speed up chemical reaction and is not itself used up in the reaction.

Modern fermentation processes include the use of protoplast fusion, gene amplification, and the recombining of DNA genes.

Penicillin was the first major pharmaceutical product to be made by micro-organisms. Now many other antibiotics, vaccines, analgesics, hormones, vitamins, alkaloids, and enzymes are in commercial production. Also improved strains of yeasts and cheese moulds.

The making of pure insulin and the promising anti-viral agent interferon by gene manipulation are stupendous achievements. Interferon, which also shows promise in cancer treatment, was first made chemically at a cost of $2 million for 50 milligrams of impure product. Biological manufacture will ultimately bring the cost down to cents per milligram of 100 per cent pure product.

Genetic programming of large-scale fermentation shows marked cost savings over non-biological manufacture of chemicals because expensive heating is not necessary and water is the only solvent needed. Also it is more specific due to one enzyme catalysing only one form of a compound, thus ensuring a high yield of a pure product.

For instance old-style yeast strains converted only about 80 per cent of wort sugar. Identification of the enzymes, and breeding back to mutagen-treated wild yeast, has resulted in new yeast strains capable of fermenting all the sugar. This has made possible the manufacture of light alcohol beers and improved breads.

Another example is the large-scale production of enzymes and their application in converting starches to sugar for use as soft-drink sweeteners.

Micro-organisms have a wide range of metabolic reactions and can adapt to many kinds of nutrition. Thus industrial fermentation can utilise cheap ingredients, in some cases materials previously regarded as waste.

Fusion, amplification and recombination. In protoplast fusion of fermentation organisms cell walls are removed and protoplasts of slow-growing strains are mixed with protoplasts from fast-growing species. Then cell walls are allowed to regenerate. Some may combine somatically and promising ones are isolated.

Gene amplification is a technique whereby plasmids that carry genes are forced to reproduce rapidly. Plasmids are small pieces of extra-chromosomal DNA that exist independently in the cytoplasm of a cell. They may be made up of two to about 250 genes.

Using a bacterium such as *Escherichia coli* a gene or cluster of genes can be transferred to a plasmid. The gene grows faster thus increasing production of the protein for which the gene codes. Most bacterial species and yeasts contain plasmids.

Genetic recombination is used to create new and stable genotypes. The DNA molecules are cut with a restriction enzyme and another enzyme is used to combine cut strands from two organisms into the DNA of *E. coli* or similar plasmid vector.

Some plant and mammalian genes have been recombined and multiplied in this way.

Of course the above is not as simple or as easy as this account might convey. However the importance of these developments is indicated by the fact that products produced by large-scale fermentation, world-wide, would have a value exceeding $5 billion per year.

The potential for new products is immense.

Genetic engineering of plants. Introduction of new genes into plants by recombinent DNA methods is still at the laboratory stage. Currently, the most promising developments are taking place by manipulating the factors which favour plant growth.

One development is the breeding of beneficial soil micro-organisms in fermentation tanks for use as manures. But improved manures are not enough. Enriched feeding is wasted if the plant is incapable of taking up the extra nutrient.

Legumes are well known for their ability to capture and store their own nitrogen supply. They do this by symbiotic relationship with the bacterium *Rhizobium* which enters the roots. Affected cells swell and divide to form nodules rich in nitrogen.

Researchers are now using mutagens to produce *Rhizobium* strains with improved nitrogen-fixing ability. The agent causing nitrogen fixation is the enzyme nitrogenase which catalyses conversion of molecular nitrogen into ammonia. Root innoculation with this and other enzymes is being tried.

A species of mycorrhiza, *Pisolithus tinctorius*, is being used to innoculate the roots of pine trees. The fungus increases the size of roots, giving them an increased surface to absorb water and nutrients. It is hoped that this will lead to fast-growing trees.

Orchids use mycorrhiza and giving them improved strains is a possibility to be explored.

Mycorrhiza make phosphate available to a plant by converting it to a soluble form and transporting it to the roots.

Promising is the isolation of the DNA of natural plant extracts of commercial value such as the pesticide pyrethrum and heart-stimulant digitalis, as well as flavourings, waxes, oils and drugs, so each may be implanted in a bacterium and grown on in fermentation tanks. This could cheapen many products. Many problems have yet to be overcome along this pathway because of the increased complexity of plant cells compared to bacteria.

Use of stress. A technique meeting with some success in building special attributes into a plant species is the use of mutagens in a stressful environment. Mutants adapted to the stress appear and will be the only ones to survive. Adaption can be carried through several generations to produce plants adapted to lower rainfall areas, and to warmer or colder conditions. This has application too for widening the flower flush.

This type of breeding could be applied to orchids. For instance by introducing virus at the flask stage. On a large enough scale there could be a few survivors capable of being the basis for a virus-resistant strain.

Intraovarian pollination. This is a technique in which some success has been achieved in plants where the ovules are comparatively large. It involves placing the pollen directly into the ovule.

Orchid ovules are extremely small and insertion of a pollen cell in this way could seem impossible. However, a micro-pipette has been made for the purpose of inserting a gene into a cell by physical means (see *Scientific American*, September 1981) which might reduce the project to being merely difficult.

Somatic hybridisation. This is a biologist's term for reproduction which by-passes the normal sexual process. It involves the actual fusion of modified plant cells from each parent, and for doing this with orchids the Eric E. Young prize of $50,000 is offered.

Such parasexual procedure has been used to produce hybrids between species of tobacco. It has also served to create a hybrid between a potato and a tomato.

This limited success was due to associating DNA from the leaf cells of two parent plants. To do so the mesophyll tissue between the epidermal layers of a leaf from each parent was extracted. This contains cells which can be isolated, fused in a nutrient solution or by a bacterial vector, and hopefully nursed into becoming plants.

Summary. Great success has been achieved in genetic manipulation at the level of micro-organisms. Beneficial bacteria are now used to produce commercial products in volume.

Some success has been achieved by gene replacement in DNA cells of plants, but mainly at the laboratory level.

Genetic engineering emphasises the importance of a gene pool. Wild species are essential to increasing variability, particularly where extensive hybridising has weakened cultivars. Perhaps the conservation of the human race depends upon the conservation of species.

Laboratories in all developed countries are working to exploit genetics and usher in a second green revolution. Techniques developed for other plants will eventually be applied to orchids.

The economic potential is so great that the multi-national companies are moving in. To protect the huge investments they have campaigned successfully for patent rights to cover the new hybrids. Australia has recently granted such rights.

Governments are also pouring millions of dollars into these research programmes. This year the European Economic Community has commenced a four-year research project based on gene transfer techniques and cloning systems in agricultural plants.

Apart from the primary objectives there will be interesting side issues from all this research. It must reveal more of plant metabolism and nutritional needs. One interesting possibility is that the breaking of all DNA genetic codes could result in an infallible basis for species determination, and hence classification.

Maybe a future orchid hybridiser will need his PhD and to have majored in genetics, chemistry, computers and microbiology.

REFERENCES

Botany. Michael Neushal. Hamilton Publishing Co, California.

Biology: Evolution and Adaption to the Environment. M. G. Kelly & J. C. McGraph, Moughton Co, USA and London.

The Plant Cell. W. A. Jensen. McMillan.

Evolution. Colin Paterson. University of Queensland Press.

Invisible World. Derek Toomer and Alan Cane. The Danbury Press.

The Double Helix. James Watson. Available most libraries.

Also copies of *The Scientific American* as under:—

April 1980. **Recombinant bacteria.** W. Gilbert & L. Villa-Komaroff.

May 1981. *Split genes.* Pierre Chambon.

July 1981. *Genetic Engineering in Mammalian Cells.* W. F. Anderson & E. G. Diacumakos.

September 1981. *The Genetic Programming of Industrial Micro-organisms.* David A. Hopwood.

A SCIENTIST'S VIEW

Genetic Engineering and Horticulture

ROBERT MILLER

Definition. It has become common knowledge that the design of all living organisms is encoded in nucleic acid chains. In every case but that of the RNA viruses, this material is deoxyribonucleic acid (DNA). The following analogy approximately illustrates the nature of the genetic code common to this planet's living things.

Imagine a simple language called D, written from left to right by right-handed beings, the Nuclei. They use only words of three letters, using an alphabet of four letters; A, C, G and T. The whole D vocabulary amounts to twenty-odd words, all of which are commands intelligible to the servile Cytoplast caste, whose R language is identical, except that they substitute U for T.

On receipt of a sequence of D-commands, the Cytoplasts rewrite them in R and execute them as:

START make formyl methionine and attach the following:–

MAKE amino acid AA (one of nineteen essential amino acids (EAA)).

MAKE amino acid AA (another or the same EAA) etc, until

STOP and release chain of EAAs.

The resulting EAA chain is a protein. If this protein has the sequence and configuration such that it can effect a chemical change on one or more other compounds, it is an enzyme. All the functions of living things are effected by single, several or myriad enzymes. Other proteins serve structural functions or form nutritional reserves, exemplified by the human shell or by the peanut kernel. However, some of the most intriguing examples are those enzymes which act upon DNA itself. Their existence has long been known, as have the chemical structures of A, C, G, T and U as adenine, cytosine, guanine, thymine and uracil in their compounds with pentose phosphates, all easily made by a competent chemist.

With the tools, the code and the raw materials readily to hand, Mary Shelley's fantasy of Dr Frankenstein loomed through the mists of Gothic piffle as a shockingly-imminent reality.

Currently, the rate of progress in the field of investigative and manipulative genetic chemistry is only equalled by the related disciplines of general biochemistry and micro-electronics, to the extent that any textbook is automatically obsolete, just as this review may well be naively simplistic when you read it, in view of newer journal papers. However, the practical implementation of the preceding introduction is styled, at least in the popular press — "Genetic Engineering".

GLOSSARY

A brief list of the elements involved in genetic engineering. Other terms are explained in the text. For more detailed information refer to the reference books mentioned.

Amino acid. An acid induced by the DNA code as part of the component of a protein.

Amoeba. Units of living cells, such as protozoa.

Chloroplasts. Organelles in a cell containing chlorophyll and hence the sites for photosynthesis.

Cytoplasm. In higher, or eucaryotic, cells a viscous material enclosing the cell. In bacterial, or procaryotic, the cytoplasmic structure is oriented to single cell existence.

Fermentation. The oxidation of materials as when alcohols are produced from sugars by yeast cells.

Enzyme. A catalytic agent in living cells which speeds chemical reactions but is not used up in the reaction.

Fusion. The coming together of two cells, as in meiosis or by somatic means.

In vitro. In a glass container.

Mutation. A sudden inheritable change in an individual resulting from modifications to the genes or chromosomes.

Mutagen. An agent which can induce a mutation.

Mycorrhiza. A symbiotic relationship between a fungus and the roots of a higher plant which may facilitate the latter's uptake of nourishment.

Nucleus. That portion of a cell containing DNA.

Mitochondria. Units within the cell which produce energy.

Protein. A chain of amino acid residues, forming the main building blocks for living organisms.

Recombination. The bringing together of cells from two individuals, each of which has had part of its genes removed, so that they merge.

It is now necessary to introduce three new concepts, two "not fully understood" (to use a popular academic euphemism) and one "not understood".

The more complex organisms, eukaryotes, have their DNA packaged into at least two chromosomes, while the apparently simpler prokaryotes have a single mass of DNA. Prokaryotes may be divided into those that

(1) absorb light, water and carbon monoxide and secrete carbohydrates, or

(2) absorb oxygen and carbohydrates and secrete electrochemical energy.

Study of the cytoplasm between the nucleus and the surface of cells of green plants reveals small particles, chloroplasts and mitochondria, which perform exactly these two functions, respectively. Similar study of animal cells reveals

mitochondria of similar composition, structure and function.

These intra-cellular sub-organisms contain their own genetic material, and they reproduce simultaneously with their host cell.

It is generally concluded that chloroplasts are modifications of symbiotic blue-green algae, and mitochrondia are modifications of fungal bacteria which have thrown in their lot with the more complex organisms.

The third aspect of extra-genetic inheritance which currently remains a challenge is the sequence of cellular differentiation from simple cell through tissue type to specialised cell. This appears to be a joint function of nucleus, cytoplasm, outer membrane and external environment, including neighbouring cells, like or unlike, and is demonstrably inheritable. The ability of one type of cell to change to a different type is called totipotency. A new theory is currently developing based on observations that hormones, the internal chemical messengers of complex organisms, are paralleled in otherwise unrelated phyla and also in secretions of single-celled species. It is postulated that these secretions serve communications and co-ordinating functions which have been retained in complex multicellular systems. Since, at the cellular level, any two species share more similarities than differences, this concept appears plausible.

One of the most advanced branches of this technology is biosynthesis, an advanced form of fermentation, which has long provided alcohol and related solvents, antibiotics, vitamins and edible protein.

An example is the use of DNA-cutting and -repairing enzymes to excise the sequence that produces insulin in animal pancreatic beta cells and to graft it into the DNA chain of a metabolically-active and rapidly-reproducing bacterium strain. The bacteria are forced to synthesise pure insulin in such quantities that it must be released into the liquid medium for harvesting.

One of the simpler laboratory modifications of cells is the enzymatic or osmotic removal of the external membrane, producing a protoplast, a blob of cytoplasmic jelly resembling an amoeba. Like an amoeba, it may in some cases be induced to engulf and incorporate a foreign body, such as DNA fragments, mitochondria or chloroplasts of a different species. Replacement of the whole nucleus of a frog ovum is a good example.

Fusion of protoplasts of different species offers vast hybridisation possibilities in the near future, the main problems being in the growing-on of hardy plants.

Another asexual hybridisation possibility is the use of a heat-sensitive virus to transfer DNA sequences, followed by tissue culture and heat-denaturing of the protein component of the virus.

Pollen and ovule culture offer the promise of homozygous or true-breeding clones, but only through the successful rearing and chromosome-doubling of sickly haploid specimens. Conservation of rare wild-types and other valuable lines for indefinite periods by de-differentiating to callus tissue to be stored in liquid nitrogen has been demonstrated. However, the variations experienced in orchid cloning and recent CSIRO work on the induction of mutation by cloning should cause some reservations in practice.

Another benefit from knowledge of genetic and protein sequences is the complete chemical synthesis, not only of natural genes and proteins, but also of modified versions which may have increased, reversed or side-effect-free activities. One week in mid-1982 saw publication of:

Synthesis of interferon, an animal protein of possible anti-viral and anti-cancer value:

Demonstration of *in-vitro* suppression of a plant virus by interferon;

Synthesis of an effective foot and mouth virus vaccine tailored to the virus;

Advertisement of an automatic device to synthesise a 15-unit DNA, equivalent to a 5-unit protein, in eight hours 20 minutes.

In view of the cash, labour and energy cost of fertilizers, nitrogen-fixing plants are economically attractive. Much effort is currently going into endeavours to transfer the symbiotic ability to fix atmospheric nitrogen from leguminous plants (Fabaceae) and a few others, to other cultivated families.

Although little or no genetic engineering currently involves the Orchidaceae, they are inherently suitable on several grounds.

Historically, the action of the first characterised plant hormone, indolyl-2-acetic acid, was first observed in an orchid and its analogues and homologues are still basic to the manipulation of plant metabolism and growth. They are used to induce the undifferentiated, or cloneable, condition of tissue.

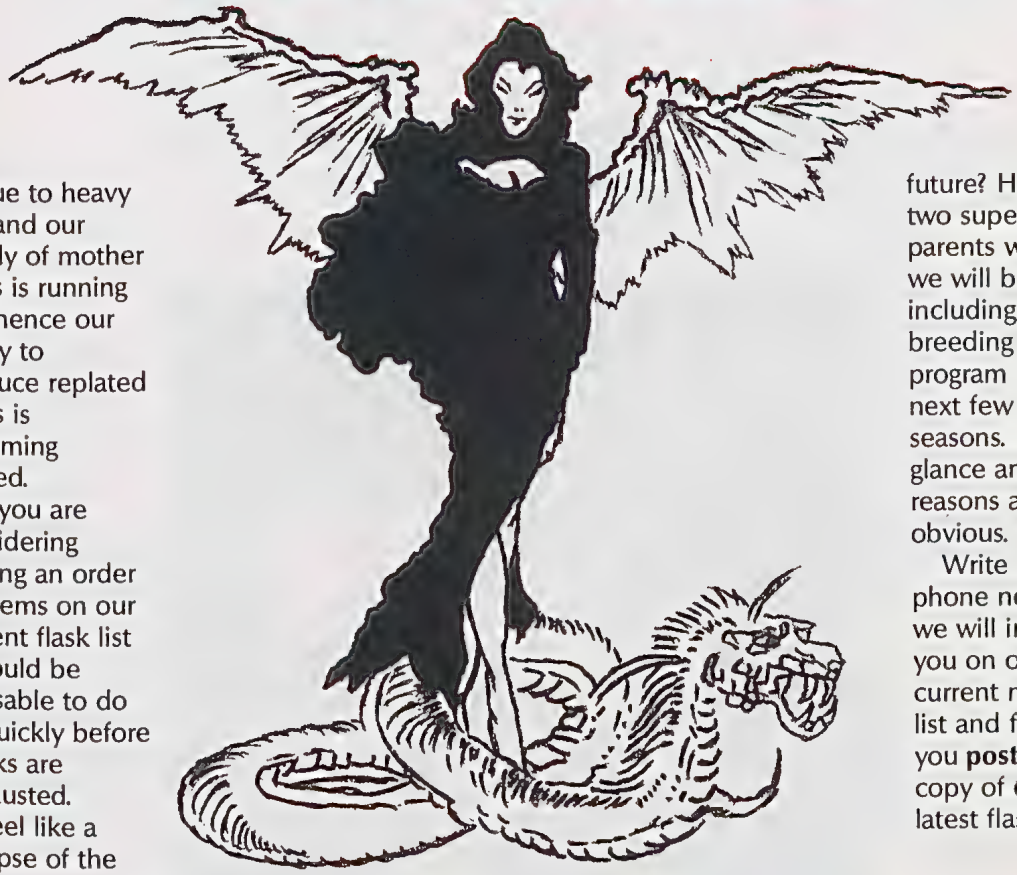
The orchids routinely enter the cloneable form, the protocorm, and this accounts for the readiness with which adult orchid tissue can be induced to form protocorm-like bodies (PLB's) which go through normal development to adulthood, whereas many other plant families are difficult to mature from callus tissue.

102 Kent Street, Epping 2121

"Much of the world's food depends on the nitrogen-fixing activities of micro-organisms."

— Derek Toomer and Alan Cane in *Invisible World.*

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Liverpool's orchid pioneers

Based on a press release from the Garden Festival Committee

Anyone contemplating a trip to England in 1984 should plan to visit the International Garden Festival at Liverpool. Many of the familiar orchids we grow were named after famous nineteenth-century growers of that city. The festival runs from April to October. The ideal would be to visit the Eleventh World Orchid Conference in March, then England in time for the International Garden Festival and the Chelsea Show in May.

If such a trip can only be in your dreams then this story of orchid growing in Liverpool, England, will stir your imagination.

Information about the festival can be obtained from the Merseyside Development Corporation, 4th Floor, Royal Liver Buildings, Liverpool, England L3 1JH.

The staging of Britain's first International Garden Festival on a riverside site in Liverpool, in 1984, is bound to interest orchid growers. And not only those who might have the opportunity of going there for Liverpool has a wonderful orchid history.

For nearly 200 years the city has been a world centre for orchid cultivation. Indeed, for more than half the 19th century, Liverpool was known as "Britain's Orchid Capital".

Towards the end of the 18th century, when the port was embarked on what was to be a sustained period of growth, ships were bringing back exotic tropical plants from South America, the West Indies and Far East.

These plants were often regarded by the crews as "perks" to be sold to wealthy shipowners, merchants, bankers and industrialists.

Sometimes too, they were despatched as official cargo by the representatives of Liverpool firms working abroad.

They knew only too well that they could earn favour with their rich employers by providing them with new plant introductions to enhance their heated stove houses and conservatories adjoining their impressive homes in the south end of the city.

Among these many and varied plants, orchids were the most highly prized. They epitomised wealth.

Anyone who could grow these sumptuous beauties to perfection, through establishing the correct heat, humidity and compost elements, earned something even money could not buy: the unbounded admiration of neighbours and a reputation as a cultivator bordering on the mystical.

Fierce, good-natured rivalry existed and resulted in many renowned private collections being established in the city. Many of the cultivators of that age are now remembered by orchids bearing their names.

Liverpool of course, was the United Kingdom's leading centre for botany for the first quarter of the 19th century. But for even longer it was the place for orchids . . .

By 1862, Liverpool collections dwarfed all those of the London area. And it is recorded:

". . . if all the specimens at Kew, Colvilles of Kings Road, London, the Royal Horticultural Society's Garden at Chiswick and Loddiges of Hackney were combined they could not match the orchid growers of the North West."

A striking testament, indeed.

But it was not merely wealth that brought this about — it was knowledge, too. In this regard, the credit must be given to the drive, vision and influence of one man: William Roscoe (1753-1831).

Many orchids and other exotic genera were lost in the early days because of lack of expertise in cultivation.

Roscoe, a man of many parts and a true son of his beloved Liverpool, but now best remembered as a brilliant botanist, saw this flaw and gathered together his wealthy friends and put the case for funding a botanic garden.

His main concern was that it should be run as a scientific undertaking so that the necessary know-how to keep rarities in cultivation, for the benefit of all, not just the wealthy, could be found.

His efforts resulted in the first Liverpool Botanic Garden officially opening in 1803.

And in 1808, a volume appeared entitled: "A Catalogue of Plants in the Botanic Garden at Liverpool". It contains a plan of the triangular-shaped gardens (bounded by Myrtle Street, Olive Street and Laurel Street).

This shows a stove house (the most accepted structure at the time for growing orchids) and a conservatory 240 feet long and 24 feet high in the centre.

The conservatory was divided into five different compartments heated at varying temperatures "adapted to the preservation of plants from every part of the world".

About 30 orchid species are listed. Significantly, there is a note: "And the merchants and masters of vessels are entitled to the thanks of the proprietors for their numerous and valuable presents of plants and seeds".

Undoubtedly, the expertise developed at the Liverpool Botanic Garden enabled the North West's growers, in the course of time, to establish the city as the country's "orchid capital".

One of the earliest South American orchids to be introduced to the Botanic Garden was *Cattleya loddigesii* in 1810. This was collected in the neighbourhood of St Paul's, Brazil.

Another early introduction was *Paphiopedilum insigne*. This was received from Nepal in 1820 from Dr Nathaniel Wallich, the eminent Danish botanist, and flowered the following year.

Wallich sent other orchids in the 1820's from the East Indies: *Cymbidium lancifolium; Dendrobium pierardi* (now *D. aphyllum*); and *Dendrobium fimbriatum*.

About the latter species, Sir William Jackson Hooker, director of Kew, noted: "Among the many valuable plants which in the month of April last (1822) I had the gratification of seeing at the rich Botanic Garden at Liverpool, none interested me more . . ."

"It was cultivated along with many other orchidaceous plants, with a degree of success which I have never before witnessed in this charming family . . ."

Another eminent botanist Dr Carey, introduced orchids to Liverpool. They included *Dendrobium calceolaria* (now *D. moschatum*), in 1820.

Zygopetalum rostatum was introduced from British Guiana, in 1827, by Charles Parker. He also introduced *Gongora atropurpurea* (now *G. quinquenervis*) in 1832.

Catasetum semipartum was presented to the Garden in 1826 by Mrs P. Falkner (wife of Mr Edward Falkner, the vice-president of the Garden), who had received it from Mr B. E. Lloyd, in Brazil.

Epidendrum polybulbon was presented in 1822 by Charles Horsfall, of Everton (Liverpool), who brought it back from Jamaica, where he had seen it flowering in large quantities among the moss at the roots of trees.

One Liverpool couple, Mr and Mrs Arnold Harrison, of Aigburth, according to Dr Lindley, assistant secretary of the Horticultural Society of London, had an "unrivalled collection" in the 1830's.

One reason, apart from their supreme skill, was the fact that Harrison's brother William, was a merchant in Rio de Janeiro, Brazil, from where he collected and despatched many plants.

Three orchids were named in the couple's honour: *Dendrobium harrisoniae* (now *Bifrenaria harrisoniae*); *Epidendrum harrisoniae;* and *Oncidium harrisonianum*.

This magnificent collection eventually passed to Mr Knight, of Kings Road, Chelsea.

Another Harrison, of Aigburth, Richard, was also an outstanding cultivator. He was the first to flower *Gongora maculata* (now *G. quinquenervis*) in 1832 and *Epidendrum oncidoides* the following year.

His gardener, Mr Perrin, is also remembered for *Laelia perrinii* and *Brassavola perrinii* (now *B. tuberculata*).

Enoch Harvey Jnr, of Aigburth, after whom *Dendrobium harveyanum* is named, obviously had an exceptional eye for a good plant. It is recorded that he begged a particularly fine colour form of *Laelia anceps* from a St Albans grower.

It was so good, in fact, that he was charged two guineas instead of the usual five shillings. And it turned out better than even he had reason to expect — enabling him to sell it back to the grower for 220 guineas! It is now known as *Laelia anceps* var. *amersiana*.

A Liverpool sugar refiner, Mr Fairrie, had Paphiopedilum fairrieanum named after him. He exhibited it in 1857, but some years later it was lost to cultivation.

Then in 1904, another orchid grower offered a reward of £1,000 for its re-discovery. It was found the following year by G. C. Searight in West Bhutan. But all he got for his trouble was half the agreed amount. He had apparently not complied with the condition to keep the location secret.

Mr and Mrs Thomas Moss, of Aigburth, are remembered for *Cattleya mossiae*. It was introduced as an unnamed cattleya by George Green from La Guaira, Venezuela, in 1836. Soon afterwards it was flowering in the Moss's collection and Hooker named it after Mrs Moss in 1839.

Chemical manufacturer Holbrook Gaskell, of Woolton (Liverpool), had one of the finest British collections and *Cattleya gaskelliana* was named in his honour. His estate and collection, by the way, passed into the hands of Liverpool Corporation after the First World War.

A Liverpool horticultural firm, J. Cowan and Co, established in 1879, specialised in introducing and growing orchids. What became of them is not known but their name lives on in *Cattleya cowaniae*.

Liverpool Botanic Garden moved to Edge Hill, only two miles from the original site, in 1836, and was taken over by Liverpool Corporation five

years later. A hundred years later, all the glasshouses and plants were destroyed by the Luftwaffe.

A further move became invevitable and this was made in the early 1950's to its present site at Harthill and Calderstones, in the south end of the city.

Work began on rebuilding the glasshouses and restoring the prized orchid collection. This was achieved through the tremendous energy and commitment of all concerned, and the great generosity of other growers.

Nowadays, the collection numbers some 5,000 orchids and achieves a broad balance between species and hybrids. Its speciality is the slipper orchid, or *Paphiopedilum*. These now number some 43 species and sub-species and 104 hybrids.

It is now one of the most comprehensive slipper orchid collections in British and possibly European botanic gardens.

This distinct group of mainly terrestrial orchids are found from India through to South-East Asia and the Philippines. They are fascinating because of the slipper shape of the flower.

In 1951, Liverpool Corporation had four crosses of slipper orchid registered under the names of the city's major parks; *P.* Calderstones, *P.* Sefton, *P.* Stanley and *P.* Sudley.

The initial cross which started off the park's hybrids was *Paphiopedilum insigne* x *P. spicerianum* made by Sir Trevor Lawrence in 1884. *P. insigne*, as mentioned was sent to Liverpool in 1820 — a wonderful connection with those early, pioneering days.

During the 50's Liverpool recognised the need for wild collected orchid species and the late Frank Kingdon Ward was part sponsored on his 1953 and 1957 "Triangle" expeditions to Northern Burma.

As a result, several notable orchid species were introduced to Liverpool. They include: *Cymbidium aloifolium* (KW 22138), *Dendrobium chrysotoxum* (KW 21807), and *Dendrobium primulinum* (KW 22205).

Another fairly rare orchid held in this collection is *Cycnoches chlorochilon* 'Calderstones'. This is an especially fine form which was received initially from Stuart Low and awarded by the Royal Horticultural Society.

The collection is now kept in good heart with frequent additions under the guidance and care of Mr Harry Buckley, Director of Recreation and Open Spaces; Mr Jim Gardiner, Curator; and the almost legendary Mr Lawrence (Olly) McGuire, the orchid cultivator, who has spent all his working life in the orchid houses.

All three are hoping that visitors to the International Garden Festival will make a point of calling to see the famous Harthill collection. "There is not a month when orchids are not in flower", says Jim Gardiner, formerly of the Royal Edinburgh Botanic Garden. "There is bound to be plenty out during the Festival, from April to October. In any event, we have many other rare glasshouse genera in which orchid enthusiasts are bound to be interested".

The garden, by the way, still retains its close contacts with many growers. Two of the most distinguished internationally in the Liverpool area are Mr Strafford Donning and Mr Kendrick Williams.

In recognition of their services to the orchid world, various plants named in their honour, may be seen in the Harthill collection.

With the International Garden Festival fast taking shape, Liverpool is about to write another world-beating chapter in its horticultural history.

And no doubt, as always, orchids will play an important part.

KNOW YOUR PLANTS

Hybrids that have been around for a long time are often assumed to be species. This was emphasised when *Paphiopedilum* Harrisianum and *Phragmipedium* Sedenii were benched in the Species Paphiopedilum Section. Both these plants are hybrids. The former being famous in its own right as the first paphiopedilum hybrid ever made, from a cross of *P. villosum* and *P. barbatum* made by the Veitch nursery in 1869.

— The North Shore Orchid Bulletin

Officers — Orchid Society of WA

Members of the Orchid Society of Western Australia (Inc) at the annual general meeting of the society elected the following office-bearers for the 1982/83 year.

President: Mr I. Duncan, 5 Salen Court, Ardross, WA 6153. Telephone 364 5439.

Secretary: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154. Telephone 330 2132.

Treasurer: Mrs K. Baylis, 18 Wheyland Street, Willagee, WA. Telephone 337 6210.

This is Mr I. Duncan's first term as president. Ian has been a member of the management committee and a member of the judging panel as an associate for the past few years.

Ian first joined The Orchid Society of Western Australia (Inc) in 1977 and was the society's delegate to the AOC annual general meeting in Brisbane during the 7th AOC Conference.

Mrs K. Baylis has been treasurer of the society continuously since 1971, which means Kay has commenced her twelfth year as treasurer. Kay has always carried out her work in a very professional manner. Mrs Baylis and her husband Jim, joined the society in 1968.

Looking forward to Townsville

North Queensland is a blend of Mecca and Miami. Somewhere every Australian should visit once in a lifetime; less sophisticated but cheaper than Miami.

It can be savoured best in good company and by merging its charm with one's own special interests. What better way to do this than attending the Eighth Australian Orchid Conference in Townsville? The show and functions are scheduled for the period August 28 to September 4 next.

There is so much to see and do in North Queensland as to make it well worthwhile to arrive early and stay on after the conference.

Splendid day tours have been arranged during the conference, so if you arrive early you can spend some time looking around the nurseries and meeting some of the private growers.

Vandaceous orchids and cattleyas will be at their best and there are many fine growers. When registering ask for the names and addresses of a few growers who would be pleased to have callers.

There are some fine nurseries too. Nothing big, just intimate. Genera mainly grown would be vandas, cattleyas and hardcanes, but also many unusuals are worth searching out. There is quite an interest in Nugini species and hybrids.

Rudi and Doreen Piltz, enthusiastic owners of Laharum Nursery at 142 Fulham Road, Gulliver, are both active workers for the conference.

They carry a good stock, most of it from their own hybridising. The parent plants are top quality. They do not chase prizes but nevertheless have been consistent winners and also have awards to their credit.

As well as orchids they have a range of palms, foliage plants and bromeliads.

Beryl and Bill Golding are another nice couple who are very active in the Townsville Orchid Society. Bill is a QOS judge. They call their establishment Magnetic Orchids. It's at 43 Arthur Street, Aitkenvale.

They hybridise by obtaining pollen from the top plants of the north's leading growers and selected plants of their own.

They have had marked success using a superb form of *Dendrobium* Impact as one parent. A seedling from *D.* Impact and *D.* Painted Doll must be the best hardcane around. It is hoped to publish a picture of it in June. The magnificent Ascocenda Yip Sun Wah on this issue's cover belongs to Beryl and Bill.

If you are a species fan then you can't miss calling on the man with the best range of them in Australia, Ian Walters of Burleigh Park. His nursery is at 1419 Ross River Road, Kelso. Ian has brought in seed, flasks and species plants from all over the world. Ian has a huge stock of flasks, mini-flasks and seedlings.

Burleigh Park is a species grower's heaven. Whatever time of year you may go there you will see a large number of them in flower.

Ted Boon, secretary to the conference, runs a collection well worth visiting. He would have the largest collection of flowering-size variegata oncidiums in Australia. They will be at their best around conference time. Ted has a wide collection of other genera too, and is open to having his arm twisted if you see anything you like.

Mick Keith and his wife Thelma run a very efficient nursery at 26 Goraki Street, Idalia Estate. They are very active members of both Townsville societies. They have made overseas trips to obtain outstanding stock and consequently have seedlings of vandas, ascocendas, cattleyas and dendrobiums of considerable promise.

If you are driving up, nurseries to visit are Marge Purnell's Dendrobe Orchids at 6 Holmes Drive, Beaconsfield, North Mackay, and Ken Bambrick at 93 Cavan Street, Koongal, North Rockhampton.

A trip to Cairns and the Tableland after the conference is well worthwhile. In Cairns you'll find Nevin's Nursery, now run by Roy and Jacque Down, also Loone's Nursery at 15 Hoad Street, Earlville. The old-established Limberlost Nursery, run by Johnny Jones, famous for its hardcanes, is at Freshwater right opposite the railway station. Freshwater station is on the rail line to Kurunda. A tourist train runs from Cairns each morning to make its almost incredible climb up the range to Kuranda, the most picturesque railway station in Australia. It stops at several photogenic spots and returns to Cairns in time for lunch.

On the motor road to the Tableland a call at D'Bush Nursery is a must. They have a mass of seedlings and advanced plants bred for colour.

Arm yourself with literature from the Queensland Tourist Bureau before you visit any of the places you would like to see. There are some wonderful sights on the Atherton Tableland. One obligatory call is Tinaroo.

Make a point too of meeting Jeff Stocker at the conference. He will be one of the speakers. You can arrange with him to call and see his fantastic collection at Milla Milla. It includes the largest accumulation of Nugini species to be found in Australia.

Australiana Orchidaceae. The 8th Australian Orchid Conference will differ from its predecessors

in two aspects. Firstly, it is being held outside a capital city and secondly, it will feature an extra day of lectures devoted to biological and historical aspects of the orchids. This day entitled "Australiana Orchidaceae" is to be sponsored by the Australian Orchid Foundation and will feature talks by the members of the Research Committee who will be holding a meeting in Townsville at that time.

The Australian Orchid Foundation has, over the last few years, sponsored several orchid workshops in various cities and this day is an extension of these. The topics covered will centre on Australian and New Guinea orchids and will include history, exploration, taxonomy, pollination, ethnobotany and physiology. These talks will not be designed for a scientific audience but will seek to explain the science of the orchids in simple and entertaining terms. During the day the audience will join Captain Cook and Joseph Banks on the Endeavour River, they will explore the highlands of New Guinea with Rudolf Schlechter and will join an Australian Orchid Foundation trip to Cape York Peninsula, they will learn something of the private lives of orchids and experience the delights of that weird section of *Dendrobium* — the Latourias as well as discovering the reasons why orchids grow and flower well.

All this (and more) will be presented by an array of lecturers probably only surpassed once in Australia — at the International Botanical Congress in 1981. These lecturers will be led by Dr Phil Cribb of the Royal Botanic Gardens, Kew in England, a world authority on orchids.

A provisional list of speakers follows.

1. With AOF on Cape York Peninsula..... Dr P. S. Lavarack
2. History of orchid discovery in tropical Queensland..... Rev Dr R. D. Collins
3. History of orchid discovery in southern Australia..... Mr D. F. Blaxell
4. Rudolf Schlechter and his work in New Guinea..... Mr A. W. Dockrill
5. The Section Latouria..... Dr P. J. Cribb
6. Ethnobotany of Orchids..... Mr L. J. Lawlor
7. Orchid pollination..... Mr D. L. Jones
8. Orchids of the north coast (NSW) Regional Botanic Garden..... Mr J. W. Wrigley
9. Orchids of the Atherton Tableland.... Mr B. Gray
10. Some aspects of orchid ecology and physiology..... Mr G. Stocker
11. Implications of Ecology and Physiology to orchid cultivation..... Dr B. Wallace
12. Orchids of Nugini..... Mr N. H. S. Howcroft

Conference tour. The Orchid Society of NSW has organised a three-week tour from Sydney by luxury coach. It will be a no-strain strip with calls at interesting places. The cost is $900, accommodation and all meals except lunch included. A two-week option from Brisbane and return is available at $720.

Phone Bill Smoothey (02) 46 2567 for details, or write to him at 15 Merlin Street, Roseville, NSW 2069.

University accommodation. Last issue $20 per day was given as the cost of full board at Flinders University. This should have been $28. It is still exceptional value.

Conference details. Brochures and registration forms have been distributed to all orchid societies. If you have not received one send immediately to: The Secretary, 8th Australian Orchid Conference, PO Box 129, Townsville, North Queensland, Australia 4810.

The brochures list the whole programme and tour details.

PRIZES FOR CONFERENCE PHOTOS

The 8th Australian Orchid Conference is sponsored by Peter Pavia Pharmacists and Pacific Films. They will provide free film for your camera during special 8 to 9 am photographic sessions at the Show. Prizes will be awarded for outstanding show photos. Those suitable for reproduction will be featured in 1984 issues of AOR. Details will be published in the June issue.

TOWNSVILLE ORCHID SOCIETY

At last AGM Mr Ray Robinson was re-elected president with Mrs Sandy Goldsmith as honorary secretary. Mr Lister Arrowsmith remains treasurer.

In last issue we wrongly mentioned Mr Robinson as president of the 8th Australian Orchid Conference committee. In fact the president of that committee is Mr Frank Tooth. Sorry Frank.

Coming International Events

Eleventh World Orchid Conference. Miami. See details elsewhere in this issue.

Eighth Australian Orchid Conference. Townsville, August 28 to September 4, 1983. Details elsewhere in this issue.

Santa Barbara International Orchid Show. Earl Warren Showgrounds Exhibition Building, March 11 to 13, 1983. Further details from Show Manager, 1096 Patterson, Santa Barbara, California 92111, USA.

British Orchid Congress 1983. October 29-30. City of Norwich, hosted by the Orchid Society of East Anglia. For details contact The Congress Administrator, Mr A. J. Towler, 62 Queens Road, Wisbich, Cambs, England.

RHS International Centenary Orchid Conference. RHS Halls, Westminster, London, March 21-24, 1985. For details write to The Conference Secretary, International Centenary Orchid Conference, Royal Horticultural Society, PO Box 313, Vincent Square, London, SWP 2PE, England.

ELEVENTH WORLD ORCHID CONFERENCE

"The World is my Garden"

That's the theme of a massive dress rehearsal 1983 show for the World Orchid Conference Show to be held March 5-12, 1984.

The dress rehearsal was at the conference venue, the huge Coconut Grove Exhibition Centre. Here the South Florida Orchid Society, host society for the 1984 conference, used its 39th International Orchid Show as its rehearsal guinea pig.

In 1984 the centre will house displays covering 9,300 square metres (100,000 square feet). The rehearsal show was half this area, but still big enough to make it the largest orchid show in the world.

Says Bob Scully Jnr, conference chairman, "never in thirty years of world orchid conferences has there been a show to approach the planned 1984 event in size, concept or cost".

It takes detailed planning and imagination to stage a flower show in so spacious a building.

To most folk "The World is my Garden" was just a stunning take-your-breath-away orchid show. "But," said chairman Scully, "to us involved in World Orchid Conference preparations the 1983 show was a dress rehearsal of some importance. We learnt the best ways to handle the huge volumes of material, how many helpers would be required, and things we previously hadn't thought of. The dress rehearsal cost about $40,000 but this is small compared to the quarter-million plus budget for the show in 1984".

Award-winning landscape architects, Henderson, Rosenberg, Scully Associates have created a master design destined to make the viewer feel part of the environment. Orchid exhibits will be in natural settings, and in the centre of the hall nearly 2,000 square metres will feature the show theme. Viewers will be able to see enchanting scenes of the Everglades from decks of various heights.

Organising all other conference activities is proceeding smoothly. The whole programme will be unique, entertaining and educational, with marvellous opportunities to meet growers from all over the world.

Even without a conference Miami is worth a trip. It's boom time there and on a par with Australia's Gold Coast, and surrounded by tropical islands.

You can go by an overseas highway with 48 bridges to Key West in the Gulf of Mexico; boat or fly to the Bahamas; or take in the gigantic Walt Disney World, recently opened, which is claimed to outdo its Californian counterpart.

The conference and its setting, Florida, will assure that registrants will enjoy an unforgettable experience.

As with the 9th and 10th conferences each State will be organising tour parties to suit their own needs.

Only NSW is able to announce plans at this stage. They have delegated Jetset Tours to organise a limited number party. It will last 29 days and cost around $3,150.

The itinerary includes a few days in Tahiti, then Miami and the conference. There will be a two-day trip to the West Indies, possibly Jamaica, and then across to Guatemala to visit the great Mayan archaeological site at Tikal. These ruins are the largest and most ancient of Mayan remnants. The palaces, public buidings and temples, all in massive stone, cover over 200 hectares and were once surrounded by square kilometres of spreading suburbs. The main temple reaches 70 metres from base to pinnacle.

Next stop is at Santa Barbara where two days will be spent visiting famous nurseries. From there the tour moves by coach to San Francisco for another two days. On the way home there will be a two-day stop at Honolulu.

The tour is already nearly filled and anyone interested should waste no time contacting Mr Bill Smoothey for further details and reservations. His phone number is (02) 64 2567, or by letter to 15 Merlin Street, Roseville, NSW 2069.

You Are All Invited

Rockhampton Orchid Society has organised a round of visits to local collections for the weekend April 30 to May 2. Growers visiting Rockhampton are invited to attend — an opportunity not to be missed because there will be wonderful things to see. For details write to honorary secretary Mr Terry Dean, 201 Grimley Street, North Rockhampton, Queensland 4701, or phone 28 2278 after hours.

SOCIETY'S $18,470 FOR CHARITY

The Brisbane Orchid Society is proud of its total of $18,470 raised for charities over the last ten years. Last year $2,750 was donated to the School for the Deaf. This year the society aims for $3,000, a sum much needed because the school's junior section was completely gutted by fire last year and valuable equipment lost.

You can help this project and enjoy the orchids by being at Zupp's Motor Showroom, 1310 Logan Road, Mount Gravatt on Saturday, April 9, 9 to 9, and Sunday from 9 to 5.

West Australian terrestrial orchid seeds

R. L. HEBERLE

Mr Ron Heberle has been a careful observer of the wonderful terrestrial orchids in the Albany district of Western Australia for over twenty years. Here he explains how large quantities of orchid seeds were collected with minimum harm to the environment. Further they were prepared and packaged in such a way as to maintain their viability.

Much of the seed has been used by scientists but Mr Heberle has supplied the Australian Orchid Foundation with stocks. A list of all such West Australian seed, and also other seed, available from the AOF Seed Bank follows this article. Note that the price has been kept at $1.00 for the first species and 50 cents for each batch thereafter, in spite of increased costs.

Mr Heberle has gone to great trouble to help the funds of the Foundation. When sending for seed you can show your appreciation of his work and the work of the Foundation by donating a few dollars over the purchase price. Donations over $2.00 are tax exempt in Australia, but ask for a separate receipt.

A natural progression to the aims and objects of the Australian Orchid Foundation was the establishment of an orchid species seed bank.

In the past germination of terrestrial seeds has proved difficult but Mr Mark Clements of The National Botanic Gardens at Canberra has demonstrated great success by symbiotic *in vitro* culture. At the moment the National Gardens cannot release the fungal isolates necessary for this type of culture. However, Mr Clements suggests that seed scattered around potted and healthy plants of *the same genus* can cause germination of a small amount of that seed. He has further suggested that asymbiotic techniques using salts and additives *at half strength* can be successful in some cases.

Researchers and experienced growers should therefore try these methods and report back to AOR on their successes so that others may be helped.

My interest is in the collecting of West Australian terrestrial seeds in and around Albany where a wealth of orchids grow (many of them in the seldom-collected category) and making them available to the AOF Seed Bank. Although I have been involved for some years I had assumed that the seeds gathered were available mainly for amateur enthusiasts. When attending the Orchid Symposium at the 1981 Botanical Congress in Sydney I was delighted to find that my seeds were being grown at orchid research centres at universities, herbariums and botanical gardens.

As a result of the stimulus from attending the Sydney Symposium and an abundant flowering season last spring, I was able to step up my production so that curator Graeme Banks and his seed bank has a stock of West Australian seeds representing some eleven genera and 30 to 40 species.

There are obvious limitations to the ability of an individual to collect seeds other than where he or she lives. It is desirable that interested people join in the collecting both in West Australia and the Eastern States. To assist these good people I will outline my methods of collecting, drying and packaging. Though rather primitive they have proved to be successful.

Initially I found seed collecting to be arduous, demanding, time-consuming, and at times quite frustrating, in relation to the collecting of hundreds of ovaries.

We are told ovaries should be collected when they change from green to brown. How simple if all you need is one or two! So to bulk production. I have tried a number of methods and have settled into the following format.

Select colonies flowering in abundance that are readily accessible and keep them under observation. A bonus to this is that you look at the orchids and see the subtle changes over the flowering cycle.

As all fertilised ovaries do not mature at the same time you would need endless visits to collect. My method is to cut the stems of a species and set them up at home in labelled bottles where they can mature under observation. I cut short pieces from the stems every few days to prevent rotting.

When the ovaries are starting to turn from green to brown I remove them individually and place them in a small plastic labelled bag which must remain open. To keep it open I use two slivers of wood tied to form a cross.

Place the bags with ovaries spread evenly, not lumped, against the inside of a window where they receive direct sunlight. Remove moisture that collects on the top underside of the bags with tissue as necessary. When all moisture has dissipated place ovaries in a labelled envelope and leave mouth open to allow further drying out.

Labelling should show genera, species, collecting locality and flowering dates. It is very important to sign or initial same because researchers may require more information.

The above is a simplification as many disastrous complications can happen with distressing

frequency if you do not keep to the format. Such as picking stems where ovaries are not well advanced in setting seed and they whither and die. Or leaving your visit to the colony too late, as on a sunny day they will dry out and release the seeds. Should you pick too green mildew is an ever-present hazard.

Inspection for grubs and other pests is essential. Dogs, cats and children must be kept away from inside drying areas.

For obvious reasons do not pick all fertilised ovaries within a colony.

The cat disaster did happen to me with a window ledge stacked to the plimsoll. Our puss chased a blowfly scattering ovaries and seeds everywhere. I was reluctant to abandon such hard-earned spoil so I labelled a large envelope MIXED. The sequel to this debacle was a polite note from a researcher requesting me to try and not mix the seeds as it made it very difficult for him.

Sorry about that Mark!

78 Campbell Road, Albany, WA 6330

AOF Orchid Seed Bank

Orders for seed should be sent to the AOF Seed Bank Curator, Mr G. S. Banks, 183 Windsor Road, Northmead, NSW, Australia 2152.

Send $1.00 for the first sample and 50 cents for each additional sample, Australian currency. Donations above these charges are welcome and will be devoted to the research and conservation projects of the Foundation.

Reasonable supplies of all the species listed are available at time of preparation of this list, however, when ordering give alternatives in case supplies are depleted. Alternatively, indicate that it can be left to the curator to substitute.

AUSTRALIAN SPECIES

The genus *Caladenia*
patersonii var. *longacauda; graminifolia; flava; dilatata* (yellow form, may not breed true for colour); *huegelii; filamentosa* var. *denticulata; filamentosa* var. *caesarea; filamentosa* var. *filifera; filamentosa; patersonii;* affinity to *patersonii: marginata; sericea; discoidea; doutchae; lobata; nana.*

The genus *Cymbidium*
canaliculatum; suave.

The genus *Dendrobium*
aemulum; bigibbum; dicuphum; dicuphum var. *album; discolor; kingianum; speciosum; mortii; teretifolium; gracilicaule; agrostophyllum; linguiforme; falcorostrum; tetragonum; tetragonum* var. *giganteum; schneiderae; monophyllum; striolatum; ruppianum.*

The genus *Phaius*
australis var. *bernaysii; tancarvilliae.*

The genus *Prasophyllum*
elatum; regium; fimbriatum.

The genus *Pterostylis*
nana; recurva; vittata; obtusa.

The genus *Sarcochilus*
fitzgeraldii; falcatus.

The genus *Thelymitra*
cucullata; crinita; fuscolutea; flexuosa; pauciflora; tigrina; canaliculatum.

There are other Australian genera available which are either monotypic or which the seed bank currently holds seeds of only one species. These are:—

Diuris laevis; Elythranthera brunonsis; Geodorum densiflorum; Lyperanthus nigricans; Microtis alba; Oberonia muelleriana.

EXOTIC SPECIES

Acampe longifolia; Barlia longibracteata [syn. of *Himantoglossum longibtracteatum*, a terrestrial with 3 cm-wide, vaguely reptilian flowers, hence 'Lizard Orchid', dense inflorescence. From Mediterranean countries and Canary Islands. — Ed.] *Brassavola nodosa; B. glauca; Cattleya patinii; C. aurantiaca; C. walkeriana; Chysis bractescens; Coryanthes maculata; Cymbidium faberi* [a Chinese miniature]; *Eulophia horsfallii; Epidendrum radocans; E. nocturnum; E. ciliare; E. stamfordianum; E. imatophyllum; E. cochleatum; E. xipheres.*

Mormodes stenoglossum; Encyclia cordigera (syn. *Epidendrum atropurpureum); Oncidium cebolleta; Odontoglossum pulchellum; O. candidulum; Schomburgkia tibicinis; Stanhopea tigrina; S. wardii; S. gibbosa.*

LATE ADDITIONS

Miltonia clowesii; Laelia anceps; L. gouldiana; Stanhopea ecornuta; Eulophidium maculatum [interesting for its showy leaves and unique in that it is the only one of its genus in Brazil, the rest being in Africa and Madagascar. — Ed.] *Lycaste powellii; Ansellia gigantea; Trichopilia marginata; Sobralia panamensis; Oncidium carthagenense; Vanda cristata; V. lamellata* var. *remeledosee; Phalaenopsis violacea; Phaius humblotii; Trichocentrum pfavii; Amesiella philippinense; Cattleya guttata* var. *williamsoniae; Vandopsis parishii* var. *marriottiana; Aerides vandarum.*

Albany — Famed for Wild Flowers

Albany is a city of more than 10,000 people situated on picturesque Princess Royal Harbour at about the most southerly part of West Australia.

The granite coast on either side embraces many magnificent sea inlets. Close by is King George Sound, famous as the locality of Robert Brown's first collection of Australian plants, including many orchids, in 1801.

Perth is about 400 km north. An annual rainfall of about 900 mm makes the area excellent for farming, and there are some industries in the town.

Above all it is famous for wild flowers and many tourists come to see them.

On August 18, 1981 Lorraine Trichaer convened a meeting for the purpose of forming an orchid society. Twenty-three enthusiasts attended and the Albany Orchid Society came into being. Lorraine was the first honorary secretary. Membership is now over sixty.

Mr Roy Sampson is president and Mrs Leigh Burrows is treasurer. The current secretary is Mr Ben Newman. He may be contacted through PO Box 13, Albany, Western Australia 6330.

The society meets on the fourth Wednesday of each month at 75 Albany Street, Albany. Visitors are very welcome.

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West Australia's fairyland of orchids

Ron Heberle's camera captures their magic

The south-west corner of Western Australia is one of the most isolated areas on earth. It is surrounded by thousands of kilometres of sea and desert. Modern man has overcome the barriers but for maybe a million years plant communities have been locked within them. The result is a unique flora.

Some orchid species are also found in other States, but very many are endemic and have evolved in their own fashion.

A few of the many beautiful terrestrials found in the Albany area are shown here.





Top: *Thelymitra variegata.* An anonymous genius dubbed this the "Queen of Sheba Orchid" and the name has stuck. Flowers grow to 4 cm wide, two or three to a stem. The colours are brilliantly iridescent. It is found on the south-west coastal plains, and flowers August to December. The leaf curls curiously around the flower stem.

Bottom: *Prasophyllum fimbria.* This genus is seldom cultivated and no one has seriously studied its cultural needs. It is a large genus of 66 species and *P.* fimbria is endemic to Western Australia. Its flower stem varies between 60 and 120 cm high. Sepals are 10 to 12 mm long. Prasophyllums flower with the labellum uppermost.

Top right: A natural hybrid between *Caladenis doutchae* and *C. filamentosa.* Natural hybrids are not uncommon among Australian terrestrials and have often vexed taxonomists. *C. doutchae* is commonly called "Purple-veined Spider Orchid". The common name of *C. filamentosa* is "Red Spider Orchid" and it is found in all States. Note the variation between clones.

Bottom right: *Caladenis gemmata.* Blue is a colour rare in orchids and some Western Australian orchids are noted for it. This species is colloquially known as "Blue China Orchid". Flowers vary in size between 4 and 7 cm wide. It has a very short oval leaf. Flowers August to October. Endemic but widespread in Western Australia.







Photos by Tony Pepper.

Softcane dendrobiums grown to perfection

See article by Mrs Ruth Rae.



Above: Norm Pearson in his shadehouse. The large plant is a magnificently-flowered *Dendrobium* Golden Blossom 'Kogane'. The cross, from *D.* Golden Eagle and *D.* Dream, was registered by J. Yamamoto in 1971.

The bottom photo shows Norm's *D.* Yodogimi 'No. 1', another Yamamoto cross from the parents *D.* Hatucharu and *D.* Oborozuki registered in 1975.

The two plants show the size and sturdy quality of the pseudobulbs. Spring was late in Grafton last year, and there were cold nights well into November, but by September 24, Grafton Show time when these photos were taken, the new leads were well advanced.

Growing softcane dendrobiums to perfection

R. M. RAE

One of the highlights of Grafton's successful 1982 Spring Show was the display of softcane dendrobiums. Conspicuous amongst these were the beautiful plants flowered by Norm Pearson. These drew admiring comments from all who saw them while the judges, veterans of many spring shows from Sydney to Brisbane, were emphatic that Norm's plants were the best that they had ever seen.

Now any good grower, especially in a favourable season, can have a vintage year. We have seen this happen many times with plants that seem to have reached a peak of perfection. We have also observed, with much trepidation, some of the methods used at times to obtain this end: fertilizers applied with such concentration that canes split and leaves fall off; leaves deliberately stripped from plants to enhance the floral display — and so on.

But what riveted our attention with Norm's dendrobiums, when we looked beyond the splendour of the flowers, was the quality of the plants themselves and their exciting potential for further excellence.

Everybody wanted to know how it was done so we set out to find the answer.

A visit to Norm's neat garden gives the first clue. Flowers, vegetables, ferns and orchids all grow luxuriantly. Everything is immaculate. Pests or diseases would be reluctant to intrude on such good housekeeping.

The shade house itself stands in an open situation as shown in photograph 1. This allows a maximum of light and air. In the shade house the plants are hung or are on high benches and there is no overcrowding. The shade cloth is made as secure as possible against the entry of pests and little spraying is needed.

Size of pot varies according to the size and vigour of the plant. Oriental Paradise No. 18, seems to produce a pair of new leads annually from each preceding cane and the roots most comfortably fill a 20 cm pot.

The photos indicate the diameter and sturdy quality of the pseudobulbs. Spring was very late in 1982 and there were cold nights well into November, but these photographs, taken on September 24, show new leads are already well advanced.

The second photo tells the whole story: the well-flowered cane for 1982, the two huge potential-flowering canes for 1983 and the new leads well away for 1984.

The compost used is based on Mackinney's Nursery cymbidium mix. Mr Mackinney has kindly supplied me with its contents: 8 parts by volume pine bark, 6 parts peanut shell, 2 parts peatmoss and 1 part fine sand. To each cubic metre is added 1 kg hoof and horn, 1 kg superphosphate, 500 gm potassium sulphate and 1 kg dolomite.

In a letter submitting this story, Mrs Rae, who has been a stalwart of the Grafton Orchid Society for over twenty years, says, "Norm is a man of few words but very green fingers. His *Dendrobium superbum* clones hang in metre-long canes fully covered with large blooms. His natives, especially *D. kingianum*, are a floral mass and the few leaves you can see among the flowers never show a blemish".

This mixture is rather too fine for dendrobiums so Norm adds charcoal and more bark until he has a coarser mix.

The fertilizer already in the compost gives marvellous growth through spring and summer, but towards the end of March when the top leaf of the new growth is about to mature Norm doses the plants with Campbell's Yellow Pack fertilizer, lower in nitrogen, higher in phosphates for good flower production.

Now, Norm is a retired gent and his time belongs to him and to his orchids so the next time of his programme is not for those whose lives are rushed. Once the canes have matured their final leaf the plants are taken outside in fair weather and hung for increasing lengths of time in full sun. The clothes line is fine for this purpose.

It is said that sometimes Norm's wife, Joy, is driven home from town at great speed and minus half her groceries because the dendrobiums' sun-bath time is up and the plants must be put back inside!

From maturity until the swelling nodes show a recognisable differentiation as flower buds water is only given to prevent shrivelling of the pseudobulbs. Once the flowering spikes are established water is given as required — perhaps once a week in winter.

The great height of the canes makes staking mandatory and this has to be done very carefully to avoid harming the flower spikes which appear from every node.

The routine followed, then, is the basic one of a judicious allowancee of light and air, food and water, plus care and cleanliness with a few additions that ensure top quality plants and flowers. We are looking forward with much interest to September 1983.

PO Box 257, Grafton 2460

BOOK OF THE YEAR

The Orchidaceae of German New Guinea

English translation of the great work by Fredrich Richard Rudolf Schlechter. Reviewed by Ronald Kerr.

One opens this massive tome (1180 B5 pages) with the expectation of finding a meticulously-written botanical and scientifically awesome work of interest largely to historically-minded botanists. Such is the impression gained from the fact that most Australians, for a generation have only known the work at second-hand.

Meticulous and scientific it is but all — I repeat ALL — serious orchid growers will find it far from awesome and of great practical help in the cultivation of the orchids it describes.

Until now only a few Australian botanists versed in German had access to the treasures it contains. By necessity they only had need to pick the skeleton of classification, and no time to disseminate the wealth of other interest in its pages.

Of course until a few years ago no one was greatly interested in the horticulture of New Guinea orchids. Certainly, some of the professional collectors collected there for the European market. These collections were mainly from coastal fringes, and from thousands of plants collected only a very few species became established as horticultural subjects.

Since World War II the rapid growth of hobby growing in Australia, combined with Australian political influence in Papua New Guinea, has made us very conscious of the botanical wonders to our north. Due also to Australian Orchid Foundation-inspired expeditions in northern Queensland we are learning more of the overlapping nature of Australian and New Guinea floras.

The late Eunice Kirkwood of Cairns was possibly the first to use New Guinea orchids as parents in commercial hybridising. Jimmy Jones of Limberlost, Cairns, was also early in the field. Kevin McFarlane, also of Cairns, has used some PNG species in his world-renowned dendrobium breeding programme.

Early work in New Guinea was also carried out by the late Kip McKillop on his famous four-hectare area orchid collection on Bougainville. Most of these plants went to the Port Moresby and Lae Botanic Gardens.

Currently there are many Australian growers with large numbers of PNG species and hybrids with PNG ancestry. The interest has grown steadily, helped by an increasing tourist flow to this fascinating area. Also, the publicity generated by some dedicated collectors and botanists, particularly Dr Andree Millar, also John Womersley, N. Cruttwell, N. Howcroft, T. Reeve and V. Chadim.

The Government of Papua New Guinea has plans to establish an export trade in propagated orchids. So this book comes at a particularly opportune time for those English-speaking growers, world-wide, interested in the horticulture of PNG orchids.

This is one of the aspects of the book where Schlechter the man emerges. Trained as a botanist he was yet fully aware of the European interest in growing orchids, and therefore he appraised many species he described for their horticultural worth. All his descriptions include details of location, and most an indication of environment.

However, there is much more to the work. As hinted the shape of a remarkable man emerges: An indefatigable worker who laboured within the framework established by tradition and extended that framework to new heights; a painstaking field botanist yet with a systematic knowledge superior to the desk taxonomists of his time; a man prepared to accept and overcome any challenge.

Schlechter's greatest work *Die Orchideen*, a complete classification of all genera, is foreshadowed in *The Orchidaceae of German New Guinea*. Both works establish him forever in the direct line of orchid taxonomists which started with Swartz. Swartz was followed by Robert Brown who laid a sound base for Lindley and Bentham. Reichenbach f., while tremendously significant, did little work on the higher levels of classification, and it was left to Pfitzer to produce a system which recognised the importance of vegetative characteristics as well as sexual morphology. Schlechter took Pfitzer as a basis to bring still greater order into orchid taxonomy.

His influence has been dominant ever since, but, as with any subjective system, it has been influenced by new discoveries and assessments. For instance the recent review by Dressler of the higher levels of orchid classification does much to sharpen appreciation of phyletic relationships. Pfitzer, Schlechter and Dressler are therefore the proponents of current philosophical concepts on orchid evolution.

For some years Dr F. G. Brieger has been painstakingly engaged in up-dating Schlechter, and the latter's original publishers, Paul Parey of Berlin and Hamburg, have been bringing out the

new *Die Orchideen* in parts. Many of the orchids with which we are familiar are being reclassified, particularly so in the genus *Dendrobium* where a number of Schlechter's sections have been raised to species level. More than half of the *Dendrobium* and Eria species affected are to be found in Australia and New Guinea.

It is most important therefore that Australian — indeed, all English-speaking botanists, be able to assess the impact of Brieger's determinations. The availability of this English translation will greatly assist their task. The Australian Orchid Foundation hopes to assist them, but the extent to which this is financially possible depends upon how quickly this limited edition can be sold.

To return to the work itself. There is a gem of a foreword by Hermon Slade, who because of his long familiarity with PNG orchids, has long been intimate with Schlechter.

Schlechter's own preface is short. It is followed by a chapter called *General Plant Geographical and Systematic Remarks*, then one on *History and plant geography*. There is a fascinating chapter on *Distribution*, one on *Biology and Morphology*, another on *Classification*.

Then the species are dealt with in order of classification — 1,463 of them, 1,102 being the author's own discoveries.

In the original the illustrations, or figures, showing a plant's structure were in a separate volume. This English version includes them in approximation to the appropriate text. It is unfortunate that collection numbers have not been included with each figure. These are summarised briefly in Appendix 7.

Seven appendices cover abbreviations used, geographical names and current equivalents. A most important one lists Schlechter's New Guinea itineraries. Three maps are on foldouts.

The dedication of all involved in producing this Australian edition is commendable. Dr Rogers (1862-1942) translated much of it for his own use and consequently the new edition is dedicated to him. Mr J. T. Simmons resurrected it from the Roger's papers. The Directors of the Australian Orchid Foundation sought the co-operation of scientist Dr Hil Katz to round off Rogers' work and translate the greater portion. Mr Don Blaxell of Sydney undertook, in his own time, the arduous task of editing. Many others helped along the way. An unfortunate oversight in the acknowledgments shown in the volume was the name of Mr Gunter Haar who helped with some of the translation.

The cost of production has been high. It would have been impossibly high without the selfless efforts of its translators, editorial team and the Directors of the Australian Orchid Foundation. The latter have demonstrated once again their interest and determination in furthering the development of scientific and horticultural orchidology in Australia. Special thanks are due to Gerald McCraith and Hermon Slade for the effort and faith they have put behind this project.

The volume, massive in every sense, is now available from the Australian Orchid Foundation, 107 Roberts Street, Essendon, Victoria, Australia 3040. It costs $150 post free. It should be an essential part of every society library. Societies ordering immediately will receive a 15 per cent discount.

CHANGES TO DENDROBIUM CLASSIFICATION

The new *Die Orchideen*

The publishers of Schlechter's *Die Orchideen* some years ago commissioned Dr F. G. Brieger to update the original work.

The new version has been published in parts, twelve of which have been produced with eight more to come. Some of the published parts have been reviewed in previous issues of AOR.

Parts 11 and 12 have particular significance for Australia because they contain a complete revision of the genus *Dendrobium*. Many of the groups concerned grow here and in New Guinea.

At this stage the revision need have little concern for the hobby grower, but it will have major impact for botanists.

Undoubtedly the sheer number and diversity of the plants in pre-Brieger *Dendrobium* has concerned many botanists but no one among them has had the resources for a comprehensive review.

Whether the review by Dr Brieger will satisfy other taxonomists is a matter for conjecture. It is certain to be debated for many years.

Dr Hil Katz has graciously consented to review Dr Brieger's reclassification in a coming issue.

Meantime interested parties can obtain copies of parts 11 and 12 from the publishers Messrs Paul Parey, Verlagsbuchhandlung, Lindenstrabe 44-47, D1000 Berlin 61 (West).

Dr Brieger has divided the old wide genus *Dendrobium* into several genera. He has incorporated some sections of *Eria* into some of these. Those kept in *Dendrobium* are divided into two sub-genera, sub-genus *Dendrobium* and sub-genus *Stachyobium*. The first sub-genus is based largely on the Indian softcanes, the second covers many Australian and Nugini sections.

The section Latouria is elevated to the genus *Latourorchis*, and some of the fleshy-leaf Australians, such as *D. linguiforme* have been brought into a new genus *Dockrillia*. The section Dendrocoryne has been elevated to a genus.

The old generic term *Callista* has been revived to accommodate *D. aggregatum* as *C. aggregata*, *D. densiflorum* as *C. densiflora*, and *D. farmeri* as *C. farmeri*.

There is lots more but we will have to wait for Dr Katz to review the section in full. In a matter of this importance this may take some time.

Meanwhile just go on using the names you know.

BOOK REVIEW

Orchid Biology — Reviews and Perspectives II

Edited by JOSEPH ARDITTI

Publication of a second volume on orchid research under the editorship of Professor Arditti is somewhat of a milestone. A series of such works will ensure that new steps in orchid science will be quickly made known to those who can use the data. And of course there is the even wider circle of orchidists who wish to be informed on what is taking place.

The idea of such a series started with publications by Professor Carl Withner (see *The Orchids — Scientific Studies*, published by Wiley Interscience). Following the retirement of Professor Withner, Professor Arditti has happily taken up the mantle. Therefore this present volume is a pleasant sign that orchid folk welcome the idea, thus ensuring the financial success of the last volume. It deserved success because its classic manual on flasking techniques alone is worth any money to a hybridiser, and there were seven other sections of great importance. This last volume has not dated, nor will the current one which contains similar ingredients for success.

The manual portion on *Orchid Seed Germination and Seedling Culture* is certain to be an essential reference for everyone from first flaskers to laboratory technicians for many years to come. It contains contributions by Joseph Arditti, Mark Clements, Gertrude Fast, Geoffrey Hadley, Goro Nishimura and Robert Ernst. It runs to 130 pages. Definitely a complete manual covering techniques and procedures, information on supplies and equipment, treatment of tropical orchids, Australian and European terrestrials, Japanese orchids and difficult species.

Step-by-step procedures for every aspect of seed and seedling handling are given. Did you know, for instance, that orchid seed is best stored by placing a small quantity of the dessicant anhydrous calcium chloride in the bottom of a screwtop test tube, covering the chemical with a small piece of cotton, placing the seed on this and screwing the cap on tightly. The seed can then be stored in the vegetable crisper of a household refrigerator where the temperature is normally around 4°C. Before sowing the seed remove the tube from the fridge and stand for two to three hours before opening to allow for temperature equilibriation. If this is not done water from the air may condense on the seeds, causing them to mould.

Handy to know, and the manual is full of practical tips like that.

The list of materials for seed culture is alphabetical which makes for quick reference. Under Alcohol we learn that if pure ethanol is not available use a cheap brand of vodka. Other effective and low-cost improvisations are suggested so that expense need not be a bother to a beginner. Diagrams show how to turn a large cardboard carton into a sterile flasking cabinet for less than a dollar. Beat that!

The section on raising Australian natives from seed is a must for those who would like to obtain seed from the Australian Orchid Foundation Seed Bank. It is written by Mark Clements and lists all our natives which have been successfully grown from seed. Unfortunately the heading over table A-16 has the word terrestrial where obviously epiphyte is meant. Terrestrials successfully germinated are listed in table A-18.

The section on handling paphiopedilum flasking, notoriously a difficult genus, will be welcomed.

Study of this manual will greatly enhance prospects for success in seed culture by first-flaskers. It reveals, too, many short-cuts for the experienced technician.

Nutrition for orchids. Most growers are concerned with how to feed their plants more than any other aspect of culture. This reviewer turned to that chapter first. It was written by Hugh A. Poole and Thomas J. Sheehan.

Dr Poole has specialised in floricultural production problems in the Department of Horticulture, Ohio State University, and at the Ohio Agricultural Research and Development Centre. Professor Sheehan is Professor of Ornamental Horticulture at the University of Florida. With his wife Marion Sheehan he is the author of *Orchid Genera Illustrated*, the best introduction to orchid morphology available.

The chapter is a review of controlled experiments on orchid nutrition and the conclusions to be drawn from them. The authors have been responsible for many such researches and here they are summarised and related to the work of others.

In Australia the main work on nutrition has been instigated by the Australian Orchid Foundation and a few commercial growers. This chapter thus affords an excellent opportunity to consider our own results in the light of American experience. The facts as set out by Poole and Sheehan can be easily followed and applied by an experienced grower.

The chapter starts by explaining how wild orchids obtain nourishment and shows there is much more to it than the occasional donation from a bird. The historical approach leads up to the significant results obtained by Poole and Seeley. The conclusions are essential reading for the serious orchid grower. They show that the requirements of different genera vary, and a blanket fertilising programme in a mixed collection can be a disadvantage for some plants, particularly cattleyas. If you aim to be a top grower, or to stay that way, run to get this book.

The opening chapter is a refreshing look at the kind of orchid safari in which each of us would like to participate. The authors are the Dunstervilles of Venezuela, which is sufficient indication of its quality.

To date there has been little opportunity for the average Australian to obtain much information on Chinese orchids. Professors Chen and Tang give a scholarly review of them based on their forthcoming publication *Orchid Flora of China*. Of major interest are the descriptions of three recently-discovered species

considered to be the most primitive members of Monandrae. Phylogenetic fans will be delighted.

Reproductions of two 700 year-old Chinese orchid paintings, albeit in black and white, are a delight.

Orchid mycorrhiza, Dr Geoffrey Hadley points out in his chapter on the subject "are very different from others and represent a unique, highly-evolved symbiotic system".

Dr Hadley is a mycologist and a reading of his chapter on symbiosis can only result in a greater appreciation of the cultural needs of orchids. There are excellent pictures from electron micrographs and many explanatory drawings.

Why do male Euglossine bees visit orchid flowers? If your mind jumps immediately to sex you may be right, but there seem to be other reasons too. The bee's main purpose seems to be the collection and storage of floral fragrance compounds and the use it makes of them is still not fully explained. The net result is that the bee acts as a marriage broker for the species and there are all kinds of interesting side issues.

The team of Dr Goh, and Professors Strauss and Arditti contribute a chapter on *Flower Induction and Physiology in Orchids.* This is a field in which research is relatively new and which ultimately could result in ways to control and increase floriferousness.

Orchid Biology is a fascinating blend of valuable data with immediate applications for the practical orchidist, plus a satisfying dosage of natural history.

The editing has been carefully done, the typography makes for easy reading, and the printing is of a high standard. It is recommended for advanced orchid growers, flaskers and society libraries.

The quickest way to obtain a copy is to send to Twin Oak Books, 4343 Causeway Drive, Lowell, Michigan, USA 49331. Cost is $US42.50, post free. Air mail $16.60 extra.

Book I is still available at the same price.

If you request it when placing your order Twin Oaks will send a *Pronouncing Dictionary of Plant Names and Botanical Terms* free. Ask too for their orchid book list. It's full of interest.

Catalogues Received

"Double U" Orchids. (Wal and Jill Upton). This list of six quarto pages is packed full of interesting natives, unusual exotic species, many paphiopedilum primary hybrids and some fascinating hybrids in assorted genera. Whatever your specialty there is something of interest for you here. For your copy send SAE to "Double U", 77 Wesley Street, Elanora Heights, NSW 2101.

Lonne's Orchid Nursery. A small format catalogue but packed with a wide range of genera, many unusual species and some promising hybrids. Most offerings are oriented to warm growing. There is a good range of African species and some hybrids of equitant oncidiums imported from Hawaii. Anyone looking for the unusual should send for this catalogue. There are some errors in nomenclature but nothing to cause misunderstanding. Address is PO Box 1059, Cairns, Queensland 4870.

Hello Darlings!

RALPH BAKER
South Australian Orchid Bulletin

On rare occasions when some small success came my way when showing orchids at the monthly meetings, I regarded it as a triumph of Mother Nature over my bumbling efforts of plant culture rather than any special effort of my own. I was therefore nonplussed when asked by other members for my recipe for the success. One question asked, usually by lady members, was what I had said to the plant, and how I had spoken to it to get such results. As I had said nothing, I gave the matter serious thought and decided to try it.

I reasoned firstly, that it would cost nothing, which is my favourite price tag. There would be no physical effort, which is for me another big plus. It could do no harm even if carried to excess, and perhaps my seedlings would even approach the glowing descriptions predicted by the hybridists.

I began with curt and discreet "Good Mornings" — discreet because if overheard I may be considered a candidate for the "funny farm". On feeding days I would announce the menu and, running a high-class establishment orchid-wise, I offered the dishes in French. On fish fertilizer days the dish of the day would be "Poisson a la Foggitt", similarly "Consomme de Nitrosol" or "Aquasol avec eau de Millbrook". The only orchid that seemed impressed was my Warrinya 'Parisienne', probably the only one that understood the language. I am afraid I have a very "ocker" collection.

When flower spike-hunting time begins, I find myself really babbling and making more promises than a politician in a marginal seat at election time. Even with all my efforts, as other growers will no doubt be aware, there are always odd orchids which are tardy in setting flower spikes. A special system was devised to combat these annoying plants. From the roof of the shadehouse I suspended a can of weed-killer by a very frayed piece of string which is positioned just above the plant and poised like the Sword of Damocles. Then, using my most sinister voice I chant — "We have our ways of making you flower".

A short treatment is usually enough to make the most reluctant plant sprout spikes like quills on the back of a porcupine.

Whether the system of talking works or not, I do not know, perhaps I should send some of the plants to coventry to act as controls. It is a very one-sided conversation, but at least there is no answering back and no arguments!

ORCHIDS OF TROPICAL QUEENSLAND

Dr P. S. LAVARACK

National Parks and Wildlife Service, Townsville

In September 1983 the Eighth Australian Orchid Conference will be held in Townsville. This is the first time an Australian Orchid Conference has been held outside a capital city and it is appropriate that the site chosen should be in the region which supports the most diverse array of native orchids in Australia.

Tropical Queensland is a land of contrasts, ranging from the cool fresh tablelands to the hot steamy lowlands and from the lush-green coasts to the dry, dusty inlands. Even within the more closely-settled eastern parts the contrasts are marked. Townsville is at sea level and averages 1129 mm rain each year, while Millaa Millaa at 831 m elevation has one of the dampest climates in Australia with 2625 mm of rain failing each year. It is this range of climates that is largely responsible for the diversity of plant and animal life in the moist tropics — a diversity of climates leading to a diversity of habitats and in turn to a diversity of species.

Seasonality is the key word in considering the climate of northern Australia. There is a vigorous and sometimes violent wet season from late December to about April followed by a prolonged dry season. Even in the moistest rainforests there is usually a period of a few weeks of water stress each year while in drier areas, such as those near Townsville or west of the ranges, this can be prolonged to several months. This variation in climate and topography, when allied to variation in soil types, provides the visitor to North Queensland with a constantly-changing landscape. The extensive plains south of Townsville now carry agricultural and pastoral developments, but once supported woodlands of paper-barks and eucalypts. To the north the mountains are close to the coast and, as they are aligned to intercept the rain-bearing south-easterlies, the mountain tops are covered in dense rainforest. Farther north, near Tully, the rainfall is higher again and the narrow coastal plain supports dense lowland jungle most of which has now given way to the sugar industry.

The imposing eastern ramparts of the coastal ranges are a constant companion to the traveller in the humid tropics. These ranges reach their highest point in the twin peaks of Mt Bartle Frere (1622 m) and Mt Bellenden Ker (1561 m). There is a television installation on the summit of Mt Bellenden Ker and rainfall records which have been kept for six years indicate a rainfall in excess of 8000 mm (or 300 inches) per year. The slopes of these ranges bear the scars of many past violent encounters with cyclones which have resulted in a dense impenetrable mass of vines and occasional vine-choked clearings. The highlands of the Atherton Tableland also support a rich rainforest, much of which has fallen to the axe as the fertile red soil has proved valuable for dairying and agriculture.

In all areas of the wet tropics the streams are a major feature, ranging from a placid trickle in the dry to a roaring torrent in the wet. The overhanging rainforest and huge boulders which line the streams of the wet tropics, contrast with the sandy beds and fringing paper-barks of those of the drier areas.

These forests are home to a diverse array of plants, among them such odd and spectacular forms as climbing palms, stinging trees, strangling figs, delicate little mosses, huge trees with gardens of epiphytic ferns and orchids. With some 350 species, this is by far the richest orchid flora in Australia, owing this position to its proximity to the incredibly-rich New Guinea orchid flora and to the diversity of habitat available. Some of the orchids of Tropical Queensland are outstandingly beautiful and, even among the less-spectacular species, there are many enchanting and interesting miniatures.

The seasonal paper-bark woodlands are well developed between Townsville and Tully. In September these woodlands are enlivened by thousands of sprays of delicate, yellow, white and purple flowers of the Tea Tree Orchid (*Dendrobium canaliculatum*). The flower spikes are often several times larger than the rest of the plant. This hardy species survives the long, hot, dry periods of winter, spring and early summer by means of moisture stored in the swollen stem and fleshy leaves.

The moister phase of the tree woodland near Cardwell is the home of several terrestrial orchids. These include several *Habenaria* species and other oddities like the bearded orchid *Calochilus holtzei* and the tiny fragile saprophyte *Didymoplexis pallens*. These are plants of the wet season and the flowers appear only after the soaking rains of January or February. They survive the dry season as underground tubers.

In the lowland moist forests the influence of the New Guinea flora is evident. Many species are shared with our northern neighbour including several spectacular species. The Bottle-brush Orchid (*Dendrobium smillieae*) which has a

crowded short spike of pink, cream and green flowers is one of these. It is found in moister eucalypt-dominated forests and flowers in spring. Another attractive *Dendrobium* is *D. nindii* which occurs in the mangroves, usually in high rainfall areas, and has large white and purple flowers, borne in a long spike near the end of a slender stem. The third spectacular species is the Moth Orchid (*Phalaenopsis amabilis*), the large white flowers of which adorn the more remote lowland gorges in mid-summer.

On the tablelands the orchids are more Australian in character, mostly not having close relations in New Guinea. Rock faces in the cloud forests of the higher peaks are often a most attractive sight, although one not usually seen by the casual visitor due to the difficult terrain. In spring flowers such as the buttercup-yellow *Dendrobium agrostophyllum*, the apricot shades of *D. fleckeri* or the brilliant white of *D. ruppianum* adorn the rocks and trees. Among the terrestrial orchids *Calanthe triplicata*, the Christmas Orchid has spikes of white flowers standing one metre tall. However, size is not everything, and a careful search of the rainforest floor may reveal delicate Jewel Orchids such as *Anoetochilus yatesae* and *Hetaeria polygonoides* which have velvety, purple-green leaves. This velvet appearance is caused by a transparent layer of cells on the upper part of the leaf. These cells act as lenses, concentrating the low levels of light available near the forest floor on to the photosynthetic cells inside the leaf.

The western margins of the Tablelands represent a transition zone between the rainforests of the coast and the dry interior. Here well-developed open forests with a reliable rainfall occur at altitudes of about 1000 m, providing a suitable habitat for a small, but attractive group of orchids. Some of these are the northern outliers of the temperate Australian Orchid flora. In this category is *Dendrobium speciosum* var. *pedunculatum* as well as the terrestrially-growing genera *Thelymitra, Diuris, Pterostylis* and *Caladenia*. One species, *Dendrobium bairdianum*, is characteristic of this habitat, occurring nowhere else.

North of Mareeba on Cape York Peninsula are small areas of dry scrub related to the moister rainforests. These "Monsoon Forests" as they are known, occur in creek beds and on rocky hillsides where fire cannot penetrate. The trees are often winter-deciduous, losing their leaves in response to the severe dry season.

Only a few orchids grow in these harsh conditions but one of these, the Cooktown Orchid, is possibly Australia's finest orchid. The Cooktown Orchid (*Dendrobium bigibbum*) is dormant during the long, dry and hot winter, coming to life with the onset of the rains in summer and flowering at the end of the wet season in about April. The large purple flowers are still a feature of Cape York monsoon forests, although those near roads and towns have largely been removed by illegal collecting.

Origins of the Tropical Orchids

The orchids of Tropical Queensland show close affinities with those of New Guinea. This is scarcely surprising when it is realised that the two land masses are separated by a narrow, shallow strait which geologists tell us has been dry land as recently as 10,000 years ago. However the relationship is more complex than is at first apparent. The theory of plate tectonics, or continental drift, has received wide acceptance in the scientific community in the last decade. This theory suggests that Australia (and New Guinea) were joined to Antarctica along with South America, Africa and India, forming the giant super-continent of Gondwanaland. About 180 million years ago this continent started to breakup and the Australian continent drifted north, undergoing a long period of isolation before finally coming in contact with the Asian plate about 12 million years ago. The resulting collision threw up the high mountains of New Guinea and Indonesia. Before this collision Australia is thought to have had a flora which evolved in cool temperate latitudes and which would appear to have had only terrestrial orchids. The evidence favours a tropical origin for the epiphytic species in the South-East Asian region.

Thus it has been only in the last 12 million years that the epiphytes which are now so much a feature of Australia's tropical and sub-tropical moist forests, reached this continent. Along with the epiphytes came some tropical terrestrials such as *Calanthe, Phaius* and the Jewel Orchids, but the typically-Australian terrestrials such as *Thelymitra* represent the original Gondwanaland orchid flora which has not flourished in the Australian tropics.

Many of the Australian tropical orchids have been isolated in Australia long enough to have evolved into distinct species, quite separate from their Asian progenitors, but a few are widespread throughout New Guinea, Indonesia and South East Asia. Thus the story of the evolution of Australia's tropical orchids is one of isolation and invasion resulting in an interesting, at times spectacular and characteristically-Australian orchid flora.

Conservation

Orchids in tropical Queensland are under the dual threats of land-clearing and illegal collecting. The clearing of rainforest has slowed appreciably in recent years, but some clearing is still occurring.

The major hope for the continued existence of the orchids lies in the dedication of National Parks. State Forests, while they are managed for sustained-yield logging, are also valuable for the conservation of orchids, but conversion to exotic pine plantations will obviously lead to destruction of the habitat. Thus the most secure refuge areas for the tropical orchids lie in large National Parks such as the Bellenden Ker Park, The Daintree River Park, Hinchinbrook Island, The Cape Tribulation Park and the several large parks on Cape York Peninsula.

However, the problem of illegal collecting remains even if sufficient reserves are created, as it is almost impossible to adequately police these National Parks and State Forests. Controls have to be placed on the sale of native orchids in order to prevent profits being made from the sale of plants illegally collected by commercial dealers. People collecting privately also can represent a threat to orchids and, while this is discouraged by the imposition of heavy fines for those caught, it is really a matter of conscience on the part of orchid lovers.

National Parks and Wildlife Service,
Pallarenda, Queensland 4810

"Himalayan Plant Journal"

Well-known orchid writer and nurseryman Mr Udai C. Pradhan is editor of this new publication which is scheduled to appear twice a year. Its theme is the reporting and conservation of Himalayan species.

Given Mr Pradhan's concern for orchids it is certain they will be prominent in each issue. In the first issue there are studies of two species on which little has previously been published, namely *Cymbidium whiteae* King & Pantling, and *C. sikkimense* Hook f.

Mr Pradhan believes his photographs of *C. whiteae* are the first ever published. It is cultivated by a very few nurseries in India but is on the endangered species list. It has potential for miniature breeding and flasks can be obtained.

C. sikkimense appears to be extinct due to urbanisation and its use as cattle fodder.

The issue has an autobiographical article by Oleg Polunin who majored in botany at Oxford. While schoolmastering he used his holidays in India and Mediterranean countries. He has written *Flowers of Europe* which has over 1,000 of his own photos; *Flowers of Greece and the Balkans;* and several other books. His *Flowers of the Himalaya,* written in collaboration with Adam Stainton, has just been published.

The rich and varied flora of the Himalaya region ensures plenty of scope for this new venture by the Pradhan family and their friends.

Subscriptions can be sent to Mr Tej K. Pradhan. Business Manager *Himalayan Plant Journal,* Atisha Villa, Atisha Road, Kalimpong 734 301, West Bengal, India. $US12 for one year, $US50 for five years, buy bank draft on any bank in London, New York or Calcutta. Please add $1.00 to cover bank charges, and $3.00 per year if airmail delivery required.

Conservation Matters

Kew's gain. Mr Mark Clements is now seconded to Kew. He will conduct a research programme on the micropropagation of endangered European terrestrial orchids.

Mark has achieved world-wide attention for his work on the symbiotic culture of Australian terrestrials. Undoubtedly he is the most experienced man in the world in this field and the application of his work to other genera is bound to save some endangered species.

Good luck Mark!

Computer listing at Kew. Kew has recently completed species lists of five South American and nine Asiatic genera. These are now on their computer file and conservation categories will be added as information is collected.

Along with the size of the orchid family the most fundamental problem in orchid conservation is lack of knowledge. Good regional accounts and monograms for the family are a rarity.

Essential but soon unavailable. One such monogram, the most complete ever, on our orchids is the just-published *Preliminary Checklist of Australian Orchidaceae* compiled by Mark Clements. It is available from the Australian Orchid Foundation, 107 Roberts Street, Essendon, Victoria, Australia 3040. Only a handful of copies are left so immediate action is necessary before they go out of print. Please enclose minimum donation of $10, plus $2.50 (overseas $3.50) for postage and packing.

Our Seed Bank. The Threatened Plants Committee, an international association of botanical organisations, in its Newsletter No. 10 of November 1982 praises the Australian Orchid Foundation for its Orchid Seed Bank programme. Apparently this is the first such programme in the world.

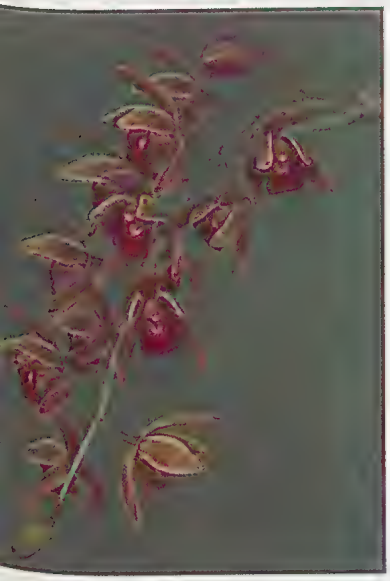
There is a strong demand for seed from both local and overseas growers. Your contribution of seed from any species will not be wasted and could help ensure that a species will not die out.

Orphan collections. An excellent conservation idea has been set in motion by the Orchid Society of Great Britain. It has been apparent for over 100 years that lack of continuity has tended to reduce the value of private collections as conservation stocks.

Now the OS of GB has set up a committee to assess any collection in need of adoption. The committee has transport and lodging organised to receive species and important hybrids. Plants of particular importance are donated to Kew.

An idea we could well follow in Australia.

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Some thoughts on the Dendrocoryne Section

TED GREGORY

Ted Gregory is probably our finest grower of native orchids. This article is based on his talk at the Seventh Australian Orchid Conference, hosted by the Queensland Orchid Society. Grateful acknowledgement is made to the Society.

Having been born and bred in the foothills of the Barrington Tops area of New South Wales, some of my earliest memories are of the beauty and scent of the tiny plants that used to grow on the trunks and branches of the brushwoods that grew so luxuriantly in the shadowy slopes and gorges of that part of the world.

My family farmed a holding in the shadow of Mount Coneac through the thirties till about the middle of the second World War, and as some of you will remember, at this time in our history, the prevailing motive was to produce more butter, meat and timber, and to hell with everything else. In fact, from the time I was big enough to swing an axe I was into the timber myself, as it was everyone to the wheel in those days to make ends meet. From the time that I could get around on my own it used to wring my heart to see the orchids being chopped to the ground and being put to the fire. I must have tried the patience of my Mother and Father for I was always lugging home rescued orchid plants and wanting assistance to tie them on the trees around our house to save them.

This old house was surrounded by huge loquat trees and more by good luck than good management they turned out to be very good hosts, and most of my plants survived and thrived. As you can guess, at that age my knowledge of culture was nil, in fact I was still a long way from my teens. Looking back, I guess the foliage of the loquats helped keep the bitter winter off the plants to a certain extent, and the flying foxes provided ample fertilizer in the spring and summer.

And like most little boys who liked flowers I was fascinated by the marvellous rock lillies that abounded in the trees there. Being a bit of a wart in those days it used to break my heart to have to leave the big ones to the fire, as no way could I carry them home, so I had to be content to lug home the smaller seedlings. Just as well really, as it was hard to find a toe-hold on my poor old loquats as it was. Looking back now, over more than half a century, the mention of a rock lily still strikes a chord with me, even though in our modern lingo of course it is *Dendrobium speciosum*. Even though this superb orchid has been known since not long after the arrival of the First Fleet it has always seemed incredible to me that so little was known about it or done with it.

Let me state here and now that I do not profess to be any great shakes as a botanist or what have you, and am writing my thoughts and impressions just as a lover of plants and all things living, in the hope that others get some enjoyment from my writings and that questions that I may throw in now and again will stimulate others to become involved in the eternal quest for knowledge. These are just a series of my thoughts on the few orchids that I will mention in passing.

Dendrobium speciosum grows over a huge climatic range, in fact almost right from the bottom of Australia to the very top in some form or other, and mainly from the coastline to the top of the Great Dividing Range.

As *D. speciosum* var. *speciosum* was the first named of this tribe I would like to say a word or two on it first. This form extends from the southern most limits of its range to about Alum Mountain in New South Wales. Along the coastal escarpment it seems to be almost entirely lithophytic, but farther inland towards the Great Divide it is not uncommon to be found growing happily as an epiphyte. Like all plants, there is quite a variation in growth habit between clones that grow on the rocks in full sun and those growing on trees in a lot of shade. Those growing on the rocks are very sturdy in habit whereas some clones in trees can be much more slender. But one thing they all have in common is that magnificent scape of large, well spaced flowers.

I think some of the most magnificent sights that I have seen in orchids were the huge groups of plants that occurred on some of the outcrops and cliffs on the Illawarra district of New South Wales. Some of these colonies of plants extended en masse for hundreds of metres and could be smelt from miles away on a warm spring night. I dare say the same masses may have occurred in the Hawkesbury area, but I was never lucky enough to see them, even though I have seen some superb individual clones from there. Getting nearer to my old area, I must admit to having a soft spot for the *D. speciosum* of the Alum Mountain area. They are very robust growers with really beautiful flowers. I have not been to this area for years and I do hope that there are many speciosums still basking in the sun on that

old rotten rock. Truly a rotten rock, as much of its stone is so old and brittle that it is a bit of a health hazard to get about on.

My wife and kids have been birdwatchers as well at times and we used to climb Alum just to watch the Peregrine falcons that have nested there since time began. One of the most beautiful sights we have ever seen was the hen peregrine nesting on her tiny ledge in a mass of kingianums in full flower.

To my knowledge Alum Mountain is about as far north as *D. speciosum* var. *speciosum* occurs, and from here on var. *hillii* takes over and reigns supreme into Queensland, at least as far as Brisbane. This is about as far north as my actual experience has taken me as yet, and I don't like to say too much about things that I have not had much to do with.

Var. *hillii* is very similar to straight *D. speciosum* in many ways, the main difference being in the flowers. These are smaller than *D. speciosum* on the average, roughly half the size; but lack of size is made up for in the number of flowers per scape, which can be double that of straight *D. speciosum*.

These scapes that literally carry hundreds of blooms give a beautiful oxtail effect which is one of hillii's greatest assets in my opinion. In some ways I think these oxtails have just as much appeal as the stately spaced spikes of *D. speciosum*.

Var. *hillii* is inclined to be much more epiphytic in habit than its southern mate but can be still seen commonly on rocks in many areas. In general the rock growers are more robust than their tree living counterparts, but I think this is mostly a matter of amount of light received as it is with straight *D. speciosum*. Another feature of var. *hillii* is the fact that white flowering clones are quite common, whereas they have always been rare in the southern form. A great deal of work has been done by Steve Clemesha in classifying the northern forms of *D. speciosum* into the varieties *grandiflorum*, *curvicaule* and *pedunculatum* and now *capricornicum*. As I said earlier I do not feel competent to say too much about these forms as I have never studied them in nature; but I would like to make an exception of var. *pedunculatum*, as this plant has interested me for many years. Over the years I have obtained quite a few plants of this variety as its growth and flower have always intrigued me.

Like *D. tetragonum*, this orchid breeds so easily with so many of our native orchids I sometimes think this plant may be entitled to a grouping all of its own. This may be just the ravings of someone who has sniffed too much pollen, but as I titled this article, it is a collection of my thoughts on this particular section of orchids.

Var. *pedunculatum* strikes me in the same manner, and I often wonder if there is a nigger in the woodpile of its ancestry too? Maybe it is just a form of *D. speciosum* that has become very localized over thousands of years? But, there is nothing to prevent me thinking that there could have been a hybrid made there aeons ago that was fertile and set up its own colonies as time went by.

The natural hybrids *D. delicatum* and *D. gracillimum* at times will set seed and breed, in fact *gracillimum* does it fairly freely. I have seen areas where the gracillimum population was that high that I think there must have been a fair bit of selfing done. I have proved beyond doubt in my collection that both the above seed and breed without much trouble. In fact, the only sterile *D. gracillimum* that I have ever owned is a beautiful speckled one that I have often tried to make use of. I think the only way we will ever know for sure is to breed and crossbreed with a lot of these types of orchids and properly document the results and see where we go from there. One of the things that make me think that *D. speciosum* var. *pedunculatum* may be a bit of an odd bod is the fact that we have used a couple of them to make the delicatum cross, and the fact that we flowered a few of these twenty two months from the flask. And these were not bottle-bound giants either, but were sown direct from the mother flask only six months from seed. I have made a few *D. delicatum* crosses with both straight *D. speciosum* and var. *hillii* and these have shown the typical *D. speciosum* slowness to mature.

Another thing that interests me with var. *pedunculatum* as well as the terrific length of peduncle is the two more or less distinct flower forms that occur, one with big starry flowers more or less as good as straight *D. speciosum* and the other which is rounded smaller and very much like the flowers of *D. gracillimum*.

And of course those *D. speciosum* var. *pedunculatum* canes can be quite fusiform in shape at times and that does not occur in any other variety of *D. speciosum* that I have had anything to do with.

Dendrobium kingianum has intrigued me from way back. It was discovered by John Carne Bidwell, explorer, and for a short time Government Botanist, about late 1839 or early 1840, on what he described as 'the Buckun', now known as the Gloucester Buckets. Bidwell named it after his friend Captain (later Admiral) Phillip Parker King, explorer, and son of our third governor.

As Gloucester was my home town this explains my involvement with kingies to a certain extent. Pardon me calling them kingies but it's an old habit that I have not tried too hard to kill.

This would have to be one of the most populous of orchids, occurring in incredible numbers over much of its range which is from Alum Mountain in New South Wales to the Carnarvon Gorge in Queensland and from the coast to the Great Divide where suitable territory exists. Kingianums are almost entirely rock dwellers and are seen at their best exposed to all the elements. They will grow happily right down into the darkest gorges as well, but I think they are at their best on those escarpments. I must say a word of warning early in the piece too, if I may. Even though I have seen these kingies growing in millions in some areas, I have also seen these same areas almost cleaned out in a few years by commercial collectors, taking them by the truckload. So don't get the idea that any of our plants are safe from the depredations of man.

Kingianums differ in one way from *D. speciosum* in the fact that even though the growth habits differ from one end of its range to the other, the flowers do not. On the average, I think the flowers are larger and more numerous on the southern of its range, but they still all look like kingies, even to the layman. The growth habit varies much more than the flowers, in the south the growths are quite robust and would not average more than six inches in length, yet on the average the farther north one goes the larger the canes of *D. kingianum* become until about the New South Wales and Queensland border where canes of up to two feet in length are not unknown. The flowers of *D. kingianum* range in size from around 15mm to 35mm on rare occasions but are more often in the 20mm to 25mm range and can vary as much in shape as they do in size. Colour range is mainly in shades of whites, pinks and mauves in an endless variety of combinations of these colours.

The flowering season is from mid-July to November and most clones remain in good flower for about a month. This is a great feature for the hobbyist as one can have a great display of flowers for months with just this one species just by selecting clones that flower at different times.

This flowering time appears to be well-built into these kingies, as I have plants from all over, and I have not seen one yet that changed its flowering time on account of anything that I could do to it.

As most of you know, I am a believer in trying to improve orchid species by breeding with selected clones, and the kingie is a great plant for this type of activity as it is a quick grower and does not take up much room on the benches. Also it will normally give quite a few flowers at three years from the bottle, which is not long as orchids go.

From my limited experience with these plants, I would think that in 4 or 5 generations we could produce plants with far superior flowers to almost anything that could be seen in the wild. Some clones breed very truly and have a good colour dominance, which will come in handy in future breeding and another trait that seems to come through fairly well is the flowering time that I mentioned earlier. Later on this factor could be worked on to extend the flowering period of this species even further if this is desirable.

Almost all the work we have done to date with kingianums has been with the compact growing form typical of the Hastings-Manning area of New South Wales and the plant size and shape seem to be fairly typical too. This leads me to believe that if we were to breed with the taller growing northern forms we would get tall growing plants as an end result.

There is no doubt that orchids get you in don't they? Here I have only mentioned a couple of species and time runs out on me and I have only said half that I would like to have said on them.

Mt Tamborine, Queensland

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An orchid by any other name . . .

PAUL E. DESAUTELS

On untold numbers of plant pot labels, in various orchid bulletins, and certainly in the newspapers, the names of orchids are frequently improperly written. These errors add all sorts of confusion to understanding orchid names which can be a relatively simple thing. I am not referring to wrong plant identifications but to how the identification is written down when it is known. A simple review of correct procedures is, perhaps, in order.

When two orchid parent plants are crossed or hybridized, all of their children are given the same name. Thus, when *Cattleya aurantiaca*, the father, is mated with *Sophrolaeliocattleya* Anzac, the mother, all the offspring from all the matings ever made between these parents have been and will be named officially *Sophrolaeliocattleya* Jewel Box. Among the thousands of plants of *Slc.* Jewel Box which have been raised to maturity through the years there have been a few which are truly superb. To identify each of these fine plants and to distinguish them from each other and from all the rest of their family, they are given nicknames, properly called the cultivar epithet. Thus we see *Slc.* Jewel Box 'Sheherezade' and *Slc.* Jewel Box 'Beverly', etc. Note that the nickname is always written with single quotation marks. Some of the individual offspring (called clones) of *Slc.* Jewel Box have been so good as to win awards. For example, *Slc.* Jewel Box 'Beverly', received an award of merit at American Orchid Society judging. From that moment on, its full and correct name became *Slc.* Jewel Box 'Beverly', AM/AOS. Every division of that plant in the future carries the same name.

There are times when plants of a hybrid cross are distributed before the whole brood (called a grex) has been given a name and been registered with the R.H.S. Labels for these plants carry the name of both parents with the mother (or seed pod carrying plant) listed first. Thus *Slc.* Flirtie x *Slc.* Meuzac. To nickname one of these special plants the usual procedure is followed with the parent names enclosed in parentheses. Thus (*Slc.* Flirtie x *Slc.* Meuzac) 'Favorite'. Sometimes two different plants that have not yet been named are bred. They are labelled in similar fashion with the seed pod parent first. Thus (*Slc.* Flirtie x *Slc.* Meuzac) x (*C.* bicolor x *Slc.* Liz Cameron). When any of these matings finally receives its official registered name the label may be changed and shortened. Of course, it may happen that I'll find in the listings something like *Slc.* Treasures of Tiffany's New York Vault. I'd like to mate that one with Stewart's Orchids new hybrid name *Slc.* Why Not. Then I'd like to register the cross as *Slc.* A, find a superb plant and give it the nickname B, get it awarded and end up with *Slc.* A 'B' AM/AOS.

Orchid Club of South Australia

The Registrar of the OCSA Inc, Mr Don Gallagher, announces that for the twelve months ended November 30, 1982 the following awards were made by the club's panel of judges:—

No. 147 4.3.82 *Onc. wentworthianum 'Regal'*, AD/OCSA. Grown by Green's Orchids.

No. 148 1.4.82 *Paph. purpuratum* 'Super Imp', HCC/OCSA. Grown by Adelaide Orchids.

No. 149 6.5.82 *Phal.* Zauberrose 'Highercombe', HCC/OCSA (78.93). Grown by Johnston's Orchids.

No. 150 3.6.82 *Den.* Hilda Poxon 'The Lodge', HCC/OCSA. (76.11). Grown by Mr and Mrs R. Rankine.

No. 151 10.7.82 *Den.* Maverick 'Ivy', HCC/OCSA. (76.41). Grown by J. C. & I. R. Marsh.

No. 152 10.7.82 Nov. *Cym.* Winter Fire 'Landseer', AD/HCC/OCSA. (75.28). Grown by T. & M. Dicmanis.

No. 153 10.7.82 *Cym.* Warella x Whyba, AD/OCSA. (Registration Pending). Grown by B. Bailey.

No. 154 12.7.82 *Paph.* Winston Churchill 'Indomitable', HCC/OCSA. (78.23). Grown by Adelaide Orchids.

No. 155 17.7.82 *Paph.* Barley Sugar 'Beverley', HCC/OCSA. (80.75). Grown by Lambert Orchids.

No. 156 5.8.82 *Cym.* Mount Pleasant 'Landseer', HCC/OCSA. (75.12). Grown by T. & M. Dicmanis.

No. 157 5.8.82 Nov. *Cym.* Inferno 'Little Tom', HCC/OCSA. (75.93). Grown by Tom Burian Orchids.

No. 158 5.8.82 Nov. *Cym.* Rincon Fairy 'Pink Perfection', HCC/OCSA. (76.38). Grown by Adelaide Orchids.

No. 159 5.8.82 Nov. *Cym.* Winter Fire 'Superlative', HCC/OCSA. (75.75). Grown by Adelaide Orchids.

No. 160 16.8.82 Nov. *Cym.* Tricia Allen 'Confidence', HCC/OCSA. (76.9). Grown by Adelaide Orchids.

No. 161 24.8.82 *Cym.* Winter Wonder 'Icicle', AM/OCSA. (84.0). Grown by Adelaide Orchids.

No. 162 2.9.82 *Cym.* Booboorowie 'Golden Bronze', AD/OCSA. Grown by Adelaide Orchids.

No. 163 2.9.82 *Cym.* Tongariro 'Perfection', EA/OCSA. Grown by Tom Burian Orchids.

No. 164 19.9.82 *Den. linguiforme*, CC/OCSA. Grown by Mrs E. Auliciems.

BIRTH OF AN ORCHID

The germination of orchids was a mystery to botanists for a long time. It was at first thought that the assistance of symbiotic fungi which occur under natural conditions, was essential (Noel Bernard). However Knudson showed that it is possible to grow orchids under sterile conditions, on synthetic media which replace the action of the symbiotic fungi.

"Rainfall is a valuable source of nutrients for epiphytic plants since it washes dust particles out of the air and onto them. The atmosphere is also an excellent source of nitrates, especially during electrical storms."

— Poole and Sheehan in *Orchid Biology II.*

West Australian societies welcome visitors

Mr Ron Heberle's pictures of West Australian terrestrials in this issue are a wonderful sample of his State's orchid wealth. In only a few years orchid growing as a hobby has proliferated there, so that the orchid wealth is not only in the ground but on the benches. In both areas there is a lot to enjoy.

West Australian growers have much to be proud of and for growers from other States there is much to make a visit there worthwhile.

Springtime is the flush wildflower season and society show time too. All the societies invite you to visit them. These reports tell you something about each society and the good folk to contact for further information.

Orchid Society of Western Australia (Inc)

The original constitution of The Orchid Society of Western Australia (Inc) was presented to a meeting of members on Friday, December 13, 1946 at the Prunella Tea Rooms, Central Arcade, Perth.

At this meeting the president in his opening address regretted that so many of "The society's foremost members" were absent, but at the same time it was unavoidable. The president went on to say that the society would be able to face 1947 with a balanced policy and constitution.

The Perth Town Hall was the venue for both the winter and spring shows for a number of years; but this venue eventually became too small owing to the increased membership and the subsequent increase in the number of plants being exhibited. Parking problems were also increasing; this not only made it hard for the members who wished to exhibit their plants but the public who wanted to see the shows were also disadvantaged.

Garden City, Booragoon has now been the venue for both the spring and winter shows of The Orchid Society of Western Australia (Inc) for a number of years.

The shows have improved from rows and rows of pots on trestle-tables to displays and layouts of the highest order.

The plants exhibited at the shows and grown in the various collections cover all the well-known genera of orchids. A number of growers are attempting to grow some of the not-so-well-known genera, the flowers that are produced are very good or as good as their breeding will permit, many have received awards.

The society became of age when host to all registrants at the 5th Australian Orchid Conference held at the Sheraton Perth Hotel on September 11-17, 1977. It was indeed an honour to be host society to such a distinguished gathering. The conference had an international flavour with representation made either in person or orchid blooms from Asia, Iran, New Zealand and South Africa.

The society has nearly 350 financial members and six affiliated societies.

The spread of orchid culture in Western Australia has been remarkable over the past few years and augurs well for the future. Having so many people interested in the growing of orchids over such a large area of the State is wonderful incentive and encouragement for the establishment of regional conferences and workshops.

The ladies' auxiliary have every reason to be proud of their achievement over the years the auxiliary has been operating. An outstanding achievement was the purchasing and the presenting of the banner used at the Australian Orchid Conferences. This banner was presented to the president of The Australian Orchid Council in Perth in 1977.

At the end of the 5th Australian Conference the banner was presented to Tasmania who were to host the 6th Australian Conference and in turn Tasmania presented the banner to Queensland and so the banner should be exhibited at each of the conferences in turn.

The auxiliary has supplied a projector with magazines, books for the library and financed the cost of a Christmas party each year.

The Orchid Society of Western Australia (Inc) is proud of its record of entertaining orchid growers visiting this State or just passing through and it is with this in mind that a cordial invitation is sent to all orchid growers intending to visit Western Australia to contact the secretary prior to arriving in Western Australia and you can be assured of a warm welcome.

The society meets on the fourth Friday of each month at the Institution of Engineers Hall, 712 Murray Street, Perth, the winter show is usually held mid-July and the spring show, the third week in September.

The WA Native Orchid Study Group

The WA Native Orchid Study and Conservation Group (Inc) held its inaugural meeting in March 1974, when a group of enthusiasts met at the home of Mr Herb Foote in Hale Road, Forrestfield; the founder of the group.

The inaugural office-bearers were as follows: President: Mr Herb Foote, Secretary/treasurer: Mr Lal Sheppard, Committee: Mrs Jean Long, Sir

Crawford Nalder, Messrs Harry Goodchild, Roy Brown and Ken Adcock and the Slide Librarian was Reg Lander.

Field trips have been held regularly each year throughout the flowering period visiting areas as far afield as Geraldton in the north and Esperance in the south, to record the habitat and flowering time of the different native terrestrials.

In the few years of the group's existence several rare orchids have been re-discovered as well as new varieties of species which have not previously been recorded.

The re-discovery of the underground orchid *Rhizanthella gardneri* caused world-wide interest and in the 1980/81 flowering season an all-out effort was made to find out as much as possible about the localities and flowering habits of this orchid.

Another orchid *Caladenia cristata* caused quite a stir when this was re-discovered and the Australian Orchid Foundation was involved in providing funds to help to conserve the habitat of this rarity.

The Nedlands City Council allocated some land to the society so as native orchids, which were in danger of being destroyed by development, could be lifted and transplanted in this reserve.

Many species of native orchids have been transplanted into this area and are doing very well. Members of the group take it in turn to attend to the area and so keep an eye on the transplants and so help to ensure their survival.

The group meets on the third Wednesday of the month at the Film Room, Agricultural Department, Jarrah Road, South Perth.

The current president Mrs Alison Harrington of 101 Webster Street, Nedlands, Western Australia and the secretary Mr Noel Hoffman of 25 Brine Road, Kalamunda, Western Australia would welcome all visitors and intended members to the group.

Bunbury Orchid Society

The preliminary discussion to form the Bunbury Orchid Society was held at the residence of Mrs Dorrie Colgan on September 12, 1972. Fifteen orchid enthusiasts attended this first meeting and it was decided to form a group or society.

At the original meeting an election of officers was held. Mr Mills was elected president and Mrs Colgan was elected secretary and the subscription for membership for twelve months was set at $1.00.

Mr Fowler of Harvey travelled some 30-40 miles each way to attend the inaugural meeting and presented a slide programme on orchids, a programme which really whetted the appetite of those attending the first meeting.

Members' homes were used for meeting places for the next eighteen months or so, a number of Perth growers made the trip to these meetings to help this eager young society to succeed.

By February 1974 the society had grown so much that the members' homes were not big enough.

The society now meets in the Oakley Street Hall, as the membership is now 100 plus throughout the south-west of Western Australia.

The Bunbury Orchid Society stages two shows a year. A winter and a spring show. The quality of the blooms are first class. Some of the Bunbury growers have exhibited at the Perth shows and have more than held their own.

The society's first exhibit took place one month after the first meeting on October 14, 1972 when the Horticultural Society of Albany staged a spring show. A brave decision for such a young society, but the idea was to encourage people interested in growing orchids to join the society and from this first exhibit the Bunbury Orchid Society has gone from strength to strength.

Members have made a number of trips to Perth by bus to visit collections. In 1979 the Bunbury Society was the organiser of the first regional conference to be held in Western Australia.

Visitors to Bunbury are always welcome. The society's monthly meeting is held in the Walker Memorial Hall, Oakley Street, Bunbury on the first Tuesday of each month. Contact the honorary secretary Mrs D. Mays, 18 Eagle Crescent, Eaton, Western Australia 6232.

Northern Districts Orchid Society

The first meeting of Northern Districts Orchid Society was held in the Morley Scout Hall in August 1975, with an attendance of 35 members and Mr R. Taylor was installed as the foundation president.

Since the inaugural meeting members have increased steadily, till there is now a membership of 154.

Monthly meetings which are held on the 4th Monday of each month in Alf Faulkner Hall, Eden Hill, are always well attended. There is always a great variety of genera on display and this creates strong competition between members.

Even with a small membership Northern Districts Orchid Society held its first spring show in 1976 at Morley City Shopping Centre and each year since, there has been a very successful spring festival. In 1981 for the first time a winter show was held at a shopping centre and was a great success.

As with all the orchid societies in Western Australia visitors are always welcome at Northern

Districts Orchid Society. Should any orchid enthusiast be staying in Perth on the 4th Monday contact the secretary, Mrs L. Lane, 276 Salmson Street, Balcatta 6021. Phone 446 9473.

Wanneroo Orchid Society

The Wanneroo Orchid Society was formed by an inaugural meeting on April 17, 1975 and the first president was Dr Edgar Griffiths. It then had 26 financial members.

At its first annual general meeting Dr Griffiths was re-elected as president, Judy Dennis as secretary and Fred Broun as treasurer. The first display was held at a local bank in September of the same year. The following three years saw shows held at the Warwick Shopping Centre. Since then they have been held at the Whitfords Shopping Centre with increasing success.

Of the original office-bearers Dr Griffiths is still an active member and Fred Broun only recently stepped down from the position of treasurer. Our existing president, Eric Kemp, has made a big influence on the continuing progress of the society serving as secretary from 1976-1979 before assuming his present position. The society at present has 48 active members and is in a sound financial position. Over the past five years Mr Ken Rex has done much to help educate new members in the art of growing orchids, apart from him also being a very successful exhibitor. In recent years Mr and Mrs Les Gale have been our most successful show exhibitors winning the main prize of grand champion cymbidium at our last three shows. They have also been instrumental in guiding many members to the successful flowering of their plants with their many talks and demonstrations.

We can look forward in confidence to the continued success of our society.

The society meets on the 3rd Thursday of each month in the lesser hall, Wanneroo Civic Centre.

For any further information contact the honorary secretary Mr R. Stapleton, 11 Chrysostom Street, North Beach, Western Australia 6020. Telephone 447 6821.

Melville District Orchid Society

The Melville District Orchid Society is an affiliated society of The Orchid Society of Western Australia (Inc) and was formed in 1975 and Mr J. Coleman was elected the society's first president.

The original membership was 36, this number has now increased to a very active 200.

The society meets on the 2nd Thursday of each month at the Roy Edinger Hall, corner of Canning Highway and Stock Road, Palmyra. Visitors from overseas or interstate are always welcome.

The Melville group have one show a year and that is in the spring, usually early September, over a period of a weekend and the venue is the Roy Edinger Hall.

These shows have become very competitive and many fine blooms and displays have been seen over the six years the society has been in existence. Conducting the show over a weekend attracts a lot of people who are looking for somewhere to go, and many of these people are now very active members.

Should any orchid enthusiast be contemplating being in Perth to coincide with the Melville Districts Orchid Society's meeting date, the 2nd Thursday each month, contact the secretary and arrangements will be made to welcome you. The secretary's address is: Mrs C. Sullivan, 46 Kennedy Street, Alfred Cove 6154. Telephone 330 2218.

Orchids and Aboriginals

The aboriginal bark painters of Arnhem Land use the juice from a crushed stem of *Dendrobium dicuphum* as a fixative for the earth pigments used in painting. This prevents the paint from flaking.

When painting each other for a corroboree the outline of the design was first roughly smeared with the juicy end of an orchid stem and the painting in white, red and yellow was executed with the same type of brush.

The above is from a description by David Attenborough in his *Journeys to the Past.*

African Orchids

A very practical little book on *African Orchids* has come to hand the day we go to press. It will be reviewed in the next issue. Written by Mollie Pottenger, an English grower who specialises in them, it describes species adaptable to English conditions.

Copies are available from H. G. Hees, 99a Kiln Ride, Wodingham, Berks. RG11 733883, England, at £4.95. However, VAT has to be deducted and postage, sea or air, added. You can send for it and be invoiced. On payment the book is despatched. H. G. Hees is a well-known firm.

VICTORIAN NATIVE ORCHID SURVEY

The Australian Orchid Foundation is funding Mrs Jenny Barnett in the making of an orchid survey of the distribution of native orchids in Victoria. She would welcome assistance from any Victorian prepared to spend time locating (NOT removing) native orchids in the bush.

To participate in this project contact Mrs Barnett, C/- Australian Orchid Foundation, 107 Roberts Street, Essendon 3040.

"Photography is a perfect companion to orchid growing. When you become a good photographer your flowers will endure on film throughout the seasons..."
— Charles Marden Fitch in *Proceedings Tenth WOC.*

A lovely letter from Nelly Slag

Now an important item to your editor missed last year because he was overseas. Mrs Nelly Slag is one of those splendid people who are the lifeblood of a society. Over the years she has been in the forefront as a worker in the activities of Toowoomba Orchid Society and in March 1981 was made a Life Member.

In a letter to the President and fellow members and published in the Society's journal *Tan Bark* in March, 1981, Mrs Slag has some nice things to say:

"I would like to thank you all for the honour you have bestowed on me for making me a life member . . . I should have said a few words, but for the first time I was speechless. . . . To be taken on as a committee member did take me about five years. Every time when I was defeated I said it must be because I'm a new Australian, but there is always next year. I was determined to get in and have my say and did I ever!

"The highlight of my career (if you can call it that) as a committee member was the display we put on in the Sixth World Orchid Conference in 1969, and got a Silver Medallion out of it. How proud we all were. I will never forget that as long as I live. Boy, O Boy, did we paint the town red those couple of days in Sydney.

"There were plenty of incidents over the years, but too many to recall. There is one, though, I'd like to comment on. . . . One particular Autumn Show we arrived at the Brisbane Town Hall when there was a strong wind blowing. Usually I packed the flowers in open boxes, and so as not to get the blooms spoiled by the sun on the way we covered them with strips of toilet paper . . . on the footpath all the paper blew off, all over Queen Street. Passing people were running everywhere to pick up the strips. We couldn't stop laughing for the rest of the day.

"I hope I have served the Society well and will do so for many years to come. Our Society must be the only one that now has a new Australian of 30 years as a life member".

Anyone who fights for five years to get on to a committee has what old Australians must call "Guts". And that is something all Australians should know and be proud about.

Toowoomba Orchid Society celebrated its Silver Anniversary in 1981 and over the years has many past and present wonderful members like Nelly Slag.

Soil bacteria create chemical reactions which provide plants with most of their needs for growth. In a gram of rich loam there may be seven or eight thousand million micro-organisms. Poor soil may only have one thousand million.

NEDOS — The Friendly SA Society

J. KEEN

On November 20, 1966, the inaugural meeting of the Northern and Eastern Districts Orchid Society Inc was held. Mr Fred Hall acted as chairman and there were eleven present and apologies were received from nine interested people, and from this meeting our society grew. Of the original twenty we have eight still with us.

Subscriptions were set at $2 per annum per member and $3 family membership — our present subscriptions are only $4 per member and $5 family membership. The founding members were wise in deciding that when the society held shows, exhibitions or displays, they would be non-competitive and first show was held in 1967.

Last year (1982) the society staged its seventeenth spring show and its fourth winter show and the first display of orchids in a suburban shopping centre. We are growing and progressing each year.

Our present membership stands at sixty single memberships and fifty-one family memberships.

In 1976 a bronze plaque was awarded to the most popular cymbidium in the spring show. This was done by the public placing a vote for *their* choice of the show. Then in 1977 we added a gold medallion and this was then awarded to the most popular cymbidium grown by an amateur, whilst the bronze plaque went to the orchid with the next highest public vote. The bronze plaque is sponsored by the Orchid Club of SA and the gold medallion by the Australian Orchid Council.

Meetings are held on the third Thursday in each month at 8 pm in St Philip's Parish Hall, Galway Avenue, Broadview — with guest speakers and/or slide programmes, plant displays and commentaries, raffle and supper.

Interstate visitors are most welcome, and, if in South Australia and unsure of meeting, contact the secretary on (08) 296 4476 and be sure of going to NEDOS — the friendly society.

"Plant lovers looking for new and exciting kinds to grow, and orchid growers seeking more variety, will find unending fascination and beauty in miniature orchids." — Rebecca Northen.

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THE LISTINGS IN THE 1982 CATALOGUE ARE STILL AVAILABLE FROM THE DISTRIBUTORS AS ADVERTISED IN THE DECEMBER 1982 ORCHID REVIEW OR WRITE DIRECT TO

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Pot. GORDON SUI 'RED RADIANCE', AM/AOS

This still very popular orchid, which is a very good grower, is available in 125 mm Pots.

Priced at the low price of $15.00 each. Plus postage.

Extremely good plants.



Slc. VALLEZAC 'BILLY MILES', AM/AOS

A lovely-shaped bright red with that attractive slight ruffling around the petals and labellum.
Available in 120 mm Pots.

Priced at $20.00 each. Plus postage.

Lc. PAGEANT 'LU KONG'

A very attractive orchid which could not fail to catch the eye.
Available only in 60 mm Pots.

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Blc. WAIKIKI GOLD LEA HCC/AOS

Another little gem to colour up your collection. A MUST.
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Pot. MEM. HIROKADZU GAUDA 'BLACKBERRY', AM/JOS
A truly lovely glowing red flower. Good shape and texture.
Available in 60 mm Pots. Priced at $7.50 each.

Blc. ALMA KEE
Yellow with red labellum. Very attractive. **Available in 60 mm Pots. Priced at $7.50 each.**

Lc. SHELLEY COMPTON
A very nice white orchid with colourful purple/red lip.
Available in 60 mm Pots. Priced at $7.50 each.

Blc. RUTH MAIO-LI 'DESTINY'
A yellow flower of good texture. **Available in 60 mm Pots. Priced at $7.50 each.**

Lc. PIRATE KING 'PORT WINE'
Wine-coloured flower. **Available in 60 mm Pots. Priced at $7.50 each.**

Lc. BONANZA No. 1
This superb deep lavender of good size and shape will enthrall you.
Available in 120 mm Pots. Priced at $15.00 each.

Blc. DANCING SUNLIGHT 'DE ORU'
Eye-catching yellow. **Available in 120 mm Pots. Priced at $15.00 each.**

Lc. TOWERING BEAUTY 'BONANZA FLORA'
Red/purple, typical Bonanza colour. **Available in 60 mm Pots. Priced at $7.50 each.**

Lc. ADOLPH HECKER 'MISTY', HCC/AOS, OS/NSW
One of the best clusters available. Pink/lavender shade.
Available in 60 mm Pots. Priced at $15.00 each.

Slc. RIFFE 'RED DECEMBER'
True red. One of the best. **Available in 60 mm Pots. Priced at $7.50 each.**

C. PENNY KURODA 'SPOTS'
Pinkish background, spots and splashes. Attractive.
Available in 120 mm Pots. Priced at $15.00 each.

ALL OF THE ABOVE PLANTS ARE PRICED PLUS POSTAGE.

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CLOSED SUNDAYS.

BOOK REVIEW

Growing Orchids III — Vandas, Dendrobiums and Others

A BOOK BY J. N. RENTOUL

Completion of this fine trilogy can be regarded as synonymous with the maturity of orchid growing in Australia.

The three books are dedicated to Madge Rentoul, whose inspiration and help made them possible.

Mr Rentoul started growing orchids at a time when the pursuit had few adherents in Australia and only four orchid societies. As grower, society officer, judge, lecturer and writer on orchids for over forty years he has done much to bring the hobby to its present high peak.

His three books show him to be as skilled with the camera as the pen. This combination gives his books terrific value as guides to the pleasures of orchid growing. While not neglecting the importance of hybrids his appreciation of species rings through.

No one can become immersed in growing orchids without being involved in questions of their history and evolution, their ecology, structure and peculiar reproductive modes, and, of course, the record of their acceptance as pets by the human race.

Jim Rentoul conveys their beauty with his camera, and their culture by descriptions of their discovery and habitat and the way they can be adapted to horticulture.

Book III devotes most space to the Asiatic orchids but there is interesting data on the smaller genera from the American tropics not covered in the first two books.

The book opens with a down-to-earth chapter on orchid names, virtually an appeal for stability.

Vandaceous orchids are covered in great detail. Experienced growers and those who would like to be will revel in it. But even if you don't, or have no wish to grow them the many anecdotes of their introduction into culture will hold your interest.

After the vandas is a chapter titled *Where Did Our Orchids Come From?* It traces a possible evolutionary history based in the theory of continental drift.

The centre ninety pages are devoted to colour photos, mainly three to a page. The captions are full of facts. As with the first two books these show significant species in a genus and then the hybrids from them. Each picture is a gem. For maximum appreciation it is best to refer to the illustrations as you read the text.

The section on dendrobiums is large and the cultural details sound. However some aspects of classification in the Phalaenanthe section need explaining in greater detail.

Other genera dealt with include *Masdevallia, Catasetum, Cycnoches, Mormodes, Maxillaria, Lycaste, Stanhopea, Chysis, Coryanthes, Gongora, Ada* and *Bifrenaria* from tropical America. Also the Asian genera *Coelogne* and *Phalaenopsis*.

If you have the first two books in the series you will need this one. You will possess a unique record of orchids, their history and their adaptation to culture.

Should you not have the other books then buy the one written around the genus or genera you are most interested in first. Add the others as you need them.

No orchid book ever seems to be published without minor warts. This is no exception but they are not important to the whole. On page 84 the naming of *Dendrobium speciosum* is credited to the botanist Johann Joseph Smith, but on page 158 correctly to Sir James Smith. On page 4 botanist Robert Brown is credited with being in Australia in 1821. He was here only from 1801 to 1804. The genus *Calanthe* was established by him in 1821 from specimens sent to the British Museum. Again, on page 45 Macquarie Island is given as 3,250 km from Tasmania whereas it is approximately 1,700 km from Hobart. There are a few other such warts but as mentioned they do not detract from the value of the book.

Published by Lothian Publishing Company Pty Ltd and available at most bookshops. Soft cover $14.95. Hard cover (recommended) $19.95.

New Society Officers

Eastwood Orchid Society. Mr G. R. Cox is the new president of this NSW society. Gordon takes over from Mrs Ruth Woodcock who has done a magnificent job for the society over many years, first as secretary and then as president. Last year the society raised $4,000 for charity. Mr L. A. Farnham is the new secretary and may be contacted through PO Box 227, Carlingford 2118. Phone 871 7749.

Melville Districts Orchid Society. The new secretary is Mrs Carmel Sullivan of 46 Kennedy Street, Alfred Cove, Western Australia 6154. Phone 330 2218.

Maroondah Orchid Society. Mrs Sandra Campbell is now honorary secretary of this strong Victorian society. Her address is 59 Anthony Street, Chirnside Park 3116. Phone 726 7157 (A/H).

Townsville District Orchid and Allied Plants Association. Mr Peter Swan is now president, following a most successful term by Mr Frank Tooth. Mr Gordon Neilson continues as secretary and may be contacted after hours on 75 1511. The association meets every third Tuesday at OES Hall, Ingham Road, commencing 8 pm.

Orchid Species Society

In the last issue it was mentioned that this very active Queensland society was formed in 1981. Now that the flak has settled AOR must confess to being a mere ten years out. Seems the date was October 1972. There were thirteen foundation members and it is believed this is the first species society formed in the world.

In October 1982 a booklet was published titled *The Orchids Species Society's Tenth Anniversary Cultural Notes 1972-1982.*

Sorry about that slip. We really did know better. Congratulations on that tenth birthday.

Current secretary M/s Paula M. Smith, PO Box 485, Toowong, Brisbane, Queensland 4066. The society meets the third Monday of each month in the Mount Cootha Botanic Gardens Auditorium.

MT ISA HONORARY SECRETARY

Apologies to Mrs M. Emmett of the Mt Isa Orchid and Foliage Society. Due to a typographical error Mrs Emmett's name was incorrectly spelt in the June issue. Mrs M. Emmett is honorary secretary, and Mr L. Emmett is president of this old-established society. Intending visitors to the Mount may contact Mrs Emmett through Box 702, Mt Isa 4825.

MORISSET'S NEW NAME, VENUE AND SECRETARY

Old-established Morisset and District Orchid Society has been handicapped a little in the past by relative isolation. Now a move to new venue 20 km or so south has changed all that.

Henceforth it will be *Morisset and Lakes Districts Orchid Society.* The new meeting place is the brand new Charmhaven Community Hall, just off the Ryreema Street turn-off from the Pacific Highway.

New secretary is Mr Brian Jacob, Lot 8 Warnervale Road, Warnervale 2259. Phone (043) 92 2705.

The new venue is centrally placed to the populous areas of Wyong, Toukley and The Entrance.

NEW VENUE FOR MORNINGTON

Mornington Peninsula Orchid Society is now meeting at Karingal High School, Ashleigh Avenue, Karingal (Melway Ref. 102, J1). The society meets the fourth Friday of each month at 8 pm. Honorary secretary is Mr L. G. Smith, 13 Glamis Avenue, Hampton, Victoria 3188.

NOTICE TO SUBSCRIBERS . . .

Your response to the subscription renewal application form contained in the December 1982 issue of the Review has been tremendous and we wish to thank you for renewing. A form is contained in this issue for subscribers who still have to renew. We would aks that you keep a record of your payment in order to know when YOUR renewal is again due in order to avoid unnecessary correspondence. As this form of renewal has been so successful we will continue to contact you through the journal. If an enquiry is necessary please make sure to quote your coding to be found on the envelope containing your Review and include an SAE for prompt reply.

May we take this opportunity of saying "WELCOME TO THE BEAUTIFUL WORLD OF ORCHIDS" to all the new subscribers who have joined our ranks.

AOC Programme Librarian

Just a reminder to officers of those societies which are associate members of the Australian Orchid Council that they need never be at a loss for a subject at a society meeting.

Mr Gunter Haar, the new programme librarian, will be pleased to send the society the latest list of slide programmes. His address is 39 Aubrey Grove, Boronia, Victoria 3155.

Your society need never lack a programme.

ORCHID HYBRID LIST FOR 1981

The European Orchid Committee is issuing annual hybrid lists in book form as being a compilation in alphabetical order of the monthly publications, including part II with parent plants also listed in alphabetical order.

Copies are obtainable from the secretary Charles F. Oertle, Via Sottochiesa, 6616 Losone, Switzerland, the prices per copy including postage being the following:

Surface Mail: Swiss francs 17. — or $A9.00.

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Cheque with order in either currency should be made payable to Charles F. Oertle or alternatively remit through bank to Credito Svizzero, Locarno, Switzerland for a/c 425172-60, Charles F. Oertle.

The 1982 list is available shortly.

"Utilisation of orchids as folk drugs in China began early in ancient times."

— Chen and Yang in *Orchid Biology II.*

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A Nice Editor Retires

Lyn Johnson has been editor of the *Maroondah Orchid Society Bulletin* practically since its inception. All that time it has been newsy, bright, packed with local cultural information. The bulletin, and Lyn, have played their part in making Maroondah one of the most active and progressive societies around.

In an explanation under the caption 'Speaking personally' Lyn announced in the Maroondah bulletin her decision to stand down. It was phrased in such a manner as to leave no doubt that the way to get a lot out of anything is to put a lot in. If you are in two minds about accepting office in your society read her explanation.

Speaking personally

"My decision to relinquish the role of editor was a difficult one — a little hard to believe, perhaps, but true. For myself, a role such as this opened the door to so many things.

"The close friends and acquaintances I have made are of particular importance, not only from Maroondah, but from other associations, both in Australia and overseas. When I first took on this position I knew absolutely nothing about these fascinating flowers, let alone how to spell or pronounce them (the learning process will, of course, go on ad infinitum) and my orchid education began with listening and talking with the experts. At that time two of these experts gave me much help and encouragement, Gerald McCraith and Julian Coker — very many thanks to you both.

"It is also a self-education programme, whereby many books come your way which must be read and information passed on to the members. In the orchid world today there is much happening, new ideas, new approaches to breeding techniques and culture. The point is that we must think about and absorb these new developments, we must be ready to take up the changes that will be demanded of us — in our growing habits and in our outlooks, we can do it wisely and imaginatively, and the orchid world will continue to thrive.

"A very special thank you to all for your terrific support and contributions over the years, especially to Roy Lyster for his light-hearted reports. Someone said to me — 'We'll miss you' — I'm not going anywhere, I will still be very much involved with Maroondah, and will always be pleased to hear from you."

A special tribute

In a way Lyn Johnson's statement is a special tribute to all those society officer-bearers who take on what appears to be difficult and time-consuming and then find the work involved is fun, and the rewards of friendships gained and knowledge and confidence acquired turn out to be infinite.

There are many like Lyn in every orchid society. Thank you Lyn Johnson for highlighting their presence.

Good luck too to David Vance who has taken over Lyn's job.

●

The complexity of plants reaches its highest in the reproductive parts of the orchid.

— Professor G. L. Stebbins in *Darwin to DNA.*

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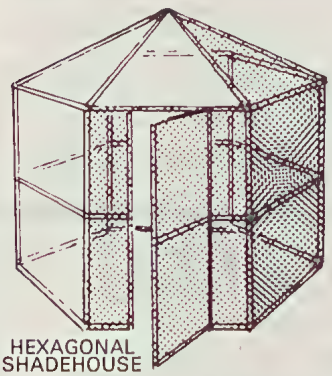
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Prices and details of these and other products will be supplied free-of-charge on request.

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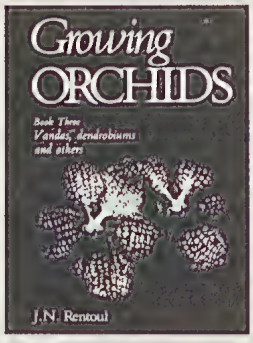
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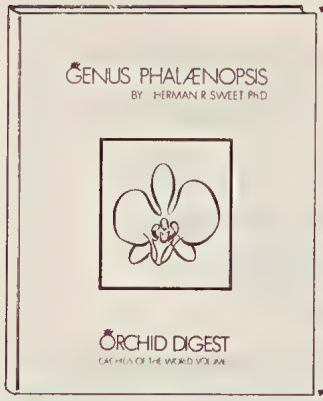
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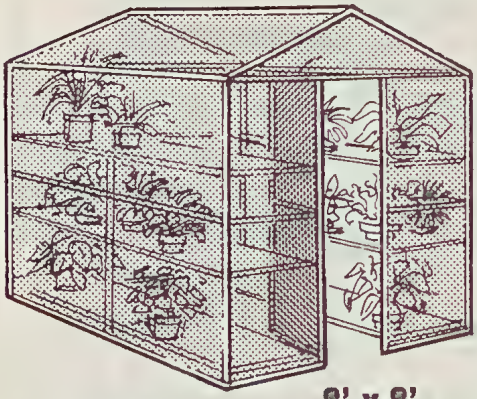
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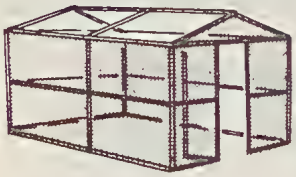


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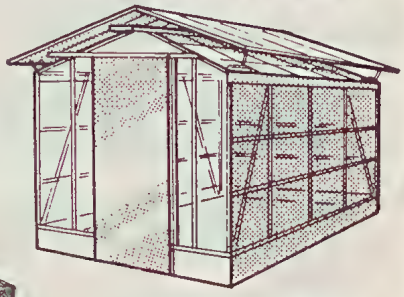
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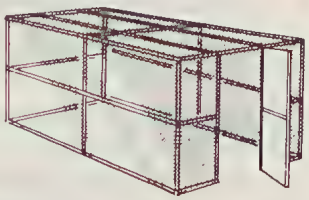
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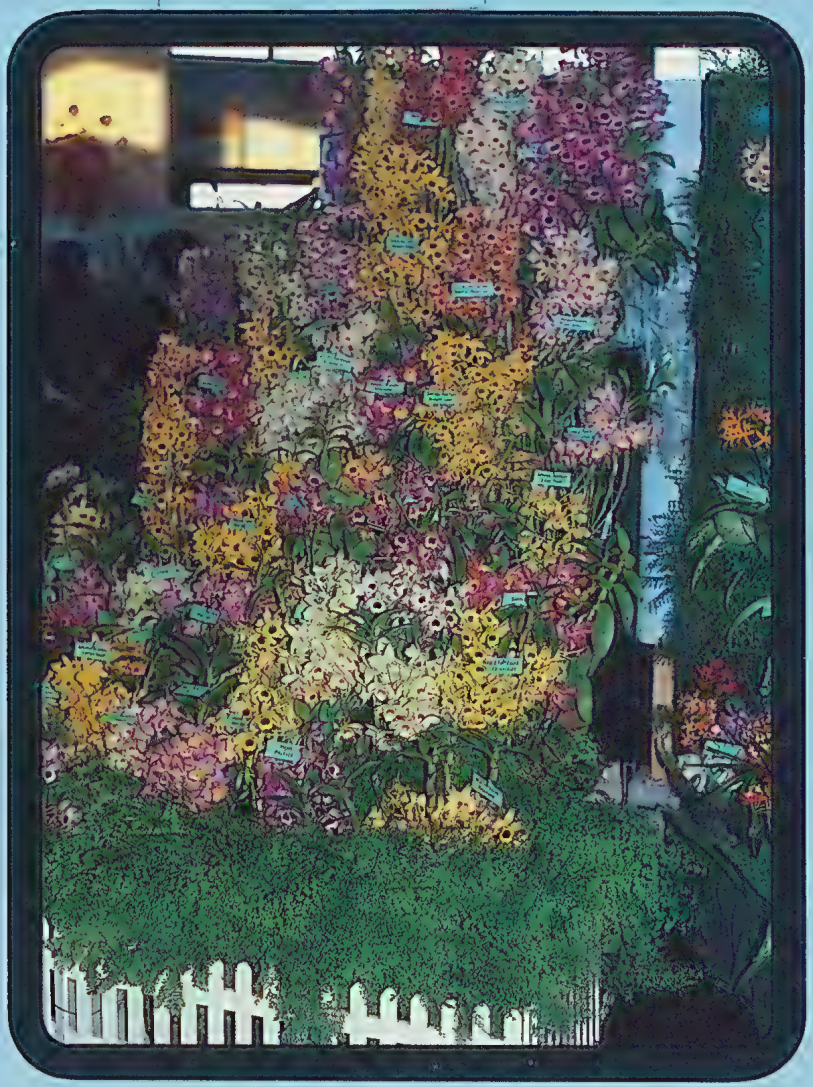
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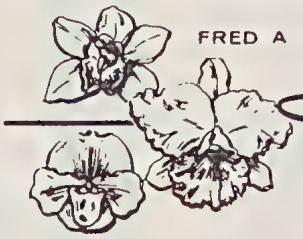
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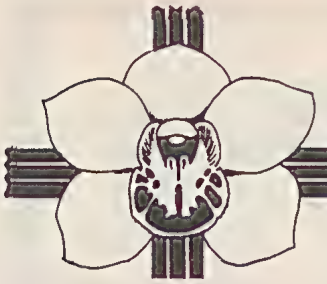
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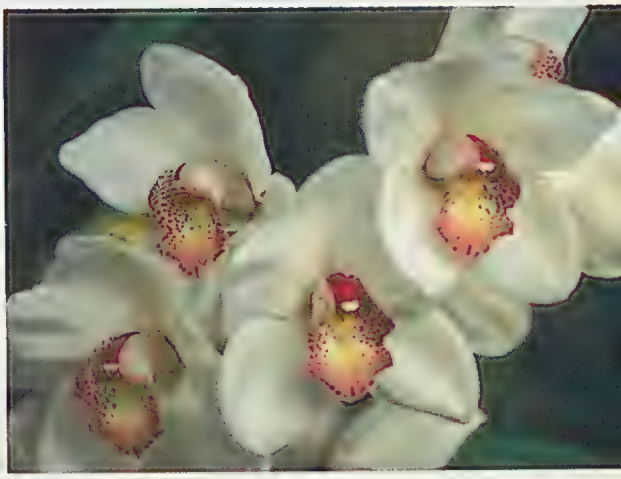
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AUSTRALIAN Orchid REVIEW

JUNE QUARTER
Vol. 48 No. 2

Printed and Published by:
GRAPHIC WORLD
14 McGill Street, Lewisham 2049
560 6166

- **Editorial Associates:**

QUEENSLAND: Mr Frank Oelkers, 419 Robinson Road, Geebung 4034.
VICTORIA: Mrs I. Hutchins, 37 Elliot Street, Mordialloc, Victoria 3195.
SOUTH AUSTRALIA: Mr N. Lenkic, GPO Box 730, Adelaide, SA 5001.
WESTERN AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154.
TASMANIA: Mr C. Nicholas, 7 Kelvin Avenue, Moonah, Tasmania 7009.
INTERNATIONAL: Mr G. H. Slade, Box 797, Vila, Vanuatu.

- **Editor: Ronald Kerr.**
- **Editorial Committee:**
  R. KERR, G. HANSEN
  A. B. PORTER, R. MILLER
- **Address Editorial to:**
  R. KERR, 260 Geoffrey Road Chittaway Point, NSW 2259 Phone: (043) 88 2605
- **Advertising, address to:**
  ELIZABETH LOWE, 14 McGill Street, Lewisham, NSW 2049. Phone (02) 560 6166
- **SUBSCRIPTIONS.** 1983. Within Australia $14.00. Overseas surface $16.00 or $US18.50. Airmail rates on request.

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NSW: Miss B. Oldfield, 61 Mountford Avenue, Guildford 2161.
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SOUTH AUSTRALIA: Mr D. J. Harris, 36 East Avenue, Black Forest 5035. Phone: 297 7525.
WEST AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154. Phone: 330 2132.
TASMANIA: Mr J. F. Smith, 11 Warren Court, Howrah 7018. Phone: 44 1555.
NORTHERN TERRITORY: Mr A. McGregor, PO Box 38493, Winnellie 5789. Phone: 81 8436.

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To comply with the International Code of Botanical Nomenclature the whole of a species is in *italics* and the second term has no capital. With hybrids only the first term is in *italics*, the second starts with a capital and is not latinised. Generic names, used in a non-botanical sense do not have a capital nor are they in italics. In society bulletins and on place card italics can be indicated by underlining.

COVER STORY

Mr Harry Spence of Tamborine Mountain is Australia's top grower of softcane dendrobiums. The display illustrated was judged Most Pre-Eminent Entry at the Seventh Australian Orchid Conference held in Brisbane during September 1982. Harry gave a lecture at the conference which is published in this issue on page 118. It demonstrates that he knows as much about the wonderful background of softcanes as he does about growing them.

8th Australian Conference poised to go

The organising committee for the 8th Australian Orchid Conference have been determined to make this the finest ever held. Location is on their side for the springtime warmth and scenic splendour of the tropics is something for all visitors to relish. Just as warm is the friendliness of the northerners and particularly those who grow orchids.

Tours have been arranged to ensure a wide choice of land and seascapes, plus tropical rain forests. Epicureans will have a wide choice, including, of course, tropical seafoods and fruits.

Show schedules have been available for some months. If you have not received one and intend entering some plants please send a stamped and addressed envelope immediately. Note that as little as one plant may be entered, or a whole display. Cut flowers may be used in displays, except in Class I which caters for tropical societies.

Class 7 is for cymbidiums and is divided into ten sections covering all colours, miniature and intermediates. This is a genus northern growers are particularly anxious to see, so a special effort by southern societies to display their top flowers is bound to be appreciated.

Southern visitors, in return, will see how well vandaceous and hard-cane dendrobiums are grown in the north.

In Brisbane both the quality and quantity in the floral art classes proved to be one of the outstanding features of the 7th Conference. This is certain to be the case in Townsville.

The show will be in the Greek Community Hall which is in Flinders Street West, practically in the heart of Townsville. This will enable the public to see what will be one of the finest orchid shows ever organised in Australia, and inevitably increase the local interest in hobby-growing.

Sixteen speakers will present new ideas on all aspects of orchids as well as confirming the soundness of many established cultural techniques.

Many of these speakers will be fronting an Australian audience for the first time. Foremost of these is Dr Phillip Cribb, Kew botanist and author of books and many scientific papers on orchids. He will be talking about Kew, its history and the wonderfully interesting work carried out there. Since the early eighteen hundreds Kew has been the world's most famous botanical institution.

Rev Canon N. Cruttwell is a sincere and colourful personality who has spent his adult life as a missionary in New Guinea. He has studied the orchids of that country and few people would know them better than he does. Over the years he has contributed papers and articles to many botanical journals and orchid magazines.

Another very knowledgeable person on PNG orchids is Geoff Stocker who now lives on the Atherton Tableland but was for many years in Papua New Guinea. In his glasshouses near Milla Milla he would have possibly the largest collection of New Guinea orchids in Australia.

Three top American growers will also be contributing. Mr John Miller is a world leader in the breeding of phalaenopsis. Mr Frank Shride of the famous Beall Company is an expert on cattleyas. Mr Emerson 'Doc' Charles knows paphiopedilums species and primary hybrids and their culture superbly well.

The firm of Wyld Court Orchids maintains the largest collection of the genus *Lycaste* in England. Mr Terry Admans, a principal of the firm, will he here to tell us all about them.

Photographic competition. Registrants are to be supplied with free film by sponsors Peter Pavia and Pacific Films. There will be prizes for pictures taken during the conference show. Any suitable for reproduction will be printed in the *Australian Orchid Review.*

Australiana orchidaceae. This is a feature never before held at a conference. It will comprise a full day, Friday, September 2, under the auspices of the Australian Orchid Foundation and devoted to aspects of Australian orchids.

STILL TIME TO REGISTER

If you have not already received the conference brochure and registration form send immediately for them to: The Secretary, 8th Australian Orchid Conference, PO Box 129, Townsville, North Queensland 4810. Mention the type of accommodation you prefer. Excellent accommodation is available at the university for only $28 a day inclusive. Most activities take place at the university. Motels, hotels and caravan parks abound.

VANDAS IN THE SYDNEY REGION

Boolaroo OS Bulletin reports a talk on vandas by Gordon Hansen, who is well known as a grower and NSW judge.

Gordon grows vandaceous orchids in terracotta pots and teak baskets and uses a very open mix. They are placed in the bush-house until it becomes cold enough to frost, upon which they are placed back in the glasshouse. At one time Gordon grew them entirely in the glasshouse, but since moving them out to the bush-house during the warmer months he finds they flower earlier and more profusely.

There is no limit to watering and feeding is very heavy.

Native orchids in the Townsville region

E. A. (Ted) BOON

Beginning 1979 my friend Doug Benson and I decided to hike around the Townsville region in order to gain an idea of the range of native orchids to be found.

Armed with a camera, a machete and knapsack for equipment and water, and wearing tough long trousers and good stout boots, we have made ten major trips. Several short trips have also been made to check particular plants.

Townsville, on the coast of North Queensland, is in a relatively dry area, with a wet season from late November through to March-April. Summers are hot, dry, humid in wet weather, while winters are dry and mild with occasional temperatures as low as 5°C in the western suburbs.

The areas checked fall into various categories: **Dry muggy savannah.** In places the soil is porous clay and some soakage areas. There are boulder slopes and ridges with stunted-tree growth. Gravel and soil slips are common. **Creeks.** The creeks are cool and moist in some cases, others are dry and full of boulders, lantana and low shrubs are common. **Semi-Tropical.** One passes through a dry area to be confronted by a cool moist area, or the reverse. There are thick carpets of dead grasses and leaves, dangerous if one is not careful, due to hidden rocks. These can cause serious accidents, or slides of several feet down slopes. Bruises and sore limbs were often the rule. **Tropical.** Characterised by creepers and dense low bushes. Sometimes a fallen tree or a break in the bushes saved us the need to cut a way in.

Perhaps we were lucky in that no real nasties were encountered. We did pass a carpet snake sleeping off a recent meal, and heard the occasional rustle of grasses due to a possible snake. The only snake we did see was on a road in a suburb below one of the Mt Stuart ridges. Several cars made a mess of it. We saw wallabies and kangaroos in plenty, however the worst pest would have to be the mosquitoes on Mt Stuart. Aerogard was a big help.

Mt Stuart. This focal point of the Townsville landscape is 607 metres high, twenty kilometres out and approximately half an hour's drive away. It proved to have the largest variety of genera.

Our first trip to the mountain was by way of a reconnaissance and to check on ground orchids. We found, on the eastern side, *Dendrobium mortii* growing on a sparsely-shaded tree with cork-like bark.Also several *D. canaliculatum* plants.

We checked the south-east area some weeks later after a fire had gone through which made walking a lot easier. Several *D. discolor* clumps were found growing on rocks and with leaves scorched by the fire. Roots were buried deep in leaf humus and firmly clinging to the rocks below.

A short distance on and over a rise we came to a gully leading to a deep boulder-strewn watercourse. The fire had come this far and burnt itself out. *Geodorum pictum* was found, a genus that was to plague me for the rest of our trips to Mt Stuart. It grew everywhere, in dry porous soil, wet boggy areas, in shade and in full sun.

We forced our way into the gully through some ferns and soon found *Sarcochilus tricalliatus* growing abundantly. Some plants were in flower. It has miniature vandaceous growth with short peduncles and two to three small crystalline white flowers. A pure gem.

Dendrobium discolor was abundant from protocorm stage to large-caned plants. Several in flower showed normal colour and form.

Three weeks later we had an even more successful trip to a different part of the south-east. First find was *Habenaria triplonema*, literally thousands of plants, some in wet boggy ground and others in dry stony ground. All were growing amongst grasses to 30 cm high and several were in spike with one or two flowers open. The flowers are shaped very like *Encyclia cochleata* (syn. *Epidendrum cochleatum*) but on a miniature scale with pale lemon colouring. On close examination one could imagine the face of a man in the labellum.

Corybas aconitiflorus grew in isolated clumps among dry rubble just off the track and among tall grass. In the black soil beneath a Moreton Bay Ash nested a reasonably large colony of *Nervilia holochila* with big pale-green leaves. Close by was the ubiquitous *Geodorum pictum*.

Along the banks of a small creek, some in full sun and others peeping through low grass we found magnificent colonies of *Pterostylis ophioglossa* var. *collina*, but only one solitary plant was in flower, its two filiform sepals soaring above the red and brown galea.

The north face of Mt Stuart was checked and proved a blank orchidaceously. However plants of the elkhorn *Platycerium veitchii* which prefers dry exposed places grew there profusely. *Hoya keesii* and various ferns such as haresfoot and maidenhairs grew in pockets of humus.

Our next trip was to the south-east again. On checking a gully protected by lantana and high grass we found it a little difficult to penetrate but we eventually worked our way in and reached a delightfully cool and moist area with a little running water. Here two plants of *Dendrobium mortii* were found, one in flower grew on a rock

lit by sunlight. The other was on the tree along with a plant of *D. discolor*. It was evident that wild pigs used this gully so we moved out and down the ridge to where the creek branched and ran through savannah grassland.

Along this creek grew small woody trees to six metres high, many of them playing host to hundreds of plants of *Sarcochilus tricalliatus*. Numerous plants were on fallen trees and branches and where possible we secured them back onto live branches. The flowering period was almost over but a number of plants still showed patches of white.

Trees disappeared and the creek became a pleasant small waterfall, cool and moist. After ambling along in the hot sun it was a delightful and welcome change. An old tree fallen across the waterfall was covered with *Dendrobium mortii* plants and seedlings.

High in a tree were several clumps of an *Oberonia* species. As we climbed back up the rocks we located a large colony of the dry-growing elkhorn *Platycerium veitchii*.

Regaining the top of the falls we investigated several trees of *Melaleuca viridiflora* about 500 metres up the slope and were rewarded by finding six plants of *Dendrobium canaliculatum* doing reasonably well. I felt it was rather unusual as it was generally not the type of country for this species.

We found no other plants, not even a terrestrial, nevertheless we spent an hour in this relaxing spot, which, due to the nature of Mt Stuart, we had not expected to find.

Our next trip was made to search for a terrestrial, *Nervilia discolor*. Two colonies were found. One was fairly extensive and virtually on a road. The other, a smaller colony, was at the base of a small drop and clustered around the base of a tree.

Pterostylis ophioglossa var *collina* and *Dendrobium mortii* were also located.

Hervey's Range. This area thirty-odd kilometres south from Townsville is hot and dry with porous soil, rocky gravel-rubble and tremendous boulders.

Our first find was a fern which remains in a semi-dry condition till rains come before bursting into new growth. However as we climbed higher and lantana and vines loomed up in front of us we began to find *Dendrobium discolor*. There were no massive plants although several had extremely long canes reaching through the lantana and tree branches. A number had developed aerial growths. Where possible we secured some of these into lower branches, hopefully to take hold and grow. Several, of the normal colour form, were in flower.

Confronted by a massive wall of boulders too smooth to climb we were compelled to take a long circuitous route to the top. Once on top we began our search for *Sarcochilus ceciliae* and found several plants growing on granite rock. Doug Benson was able to get some excellent photographs of *Cymbidium suave* in flower while I checked out the surrounding area.

Climbing higher I found plants of *Dipodium punctatum*. With this species one only sees the stem of flowers because it is saprophytic. The flowers range in colour from a pale pink with maroon spotting to a deep pink with spotting. Several flowers were gathered to see if they would cross with *Cymbidium madidum* var. *leroyii*. Although dipodium is related to cymbidium this way-out attempt at hybridising did not succeed.

Continuing on we passed a massive boulder where grew high up and out of harm's way solitary clones of *Dendrobium monophyllum* and *D. linguiforme*. Around the edge of a rock perched near the edge of a sheer drop we found a massive colony of *Sarcochilus ceciliae* plants. Nearly all were carrying light lavender-pink flowers. The colony had almost encircled the rock and was exposed to high moist winds and warmth from the rocks. Hopefully this colony, protected and isolated as it is, will flourish without fear of depletion by human hands.

Working our way down from this rock a three-bulbed plant of *Cymbidium madidum* was seen, and also several scraggy plants of *Dendrobium canaliculatum* growing on a different host tree to the usual one. Some small plants of *Sarcochilus ceciliae* had had the tops eaten off, presumably by wallabies.

Back at our starting point *Dendrobium teretifolium* was growing on rocks in full sun. The plants were tough and scrawny and nothing like those growing in shaded locations.

Close by we saw another colony of *Sarcochilus ceciliae* and Doug set about photographing one with five open lilac-pink flowers. While he was doing so I noticed an almost vivid purple flower and found it to be a very nice form of *S. ceciliae* growing in dry polypodium and not attached to the rock, which was unusual. It is possible it may have been growing higher up on the rock, and during a slip or heavy rain, may have slid to the polypodium.

Another trip was made to Hervey's Range to cut and gather aged and dried logs of eucalyptus for use as pots and totem poles. On this occasion we found several plants of *Cymbidium canaliculatum* in spike. They were the normal form and colour, maroon with green markings.

We found too a small grove of *Melaleuca viridiflora* hosting a medium-size colony of *D.*

canaliculatum which would, I guess, be the highest location of this species that I know. They were in flower and I felt them to be a slightly greener yellow on the sepals and petal tips than the coastal form.

On another occasion we tried out an area south of the above. We found colonies of *Sarcochilus tricalliatus* and *S. ceciliae* growing close together and checked carefully to see if there were any natural hybrids, however with no result.

We checked the area visited on our previous trip. Fires had swept through days before, and being hot and dry as well plants had already suffered. The location of the vivid purple-flowered *S. ceciliae* had been devastated. Rain fell a few days later. I hope it rejuvenated all plants.

We crept past a reasonably-sized python sleeping off the effects of a meal.

One day we set off to explore a clearing we had seen from the top of the Hervey Range. Leaving the car there we hiked into hills lushly covered with hoop pines and creepers. Going was easy with no stones to trip over and presently we came to a wide sandy reach of Black River. Crossing, we came to a shady moist glen filled with maidenhair ferns, but no sign of orchids. Further up a small waterfall moistened the air and we noticed a few plants of *Dendrobium teretifolium*. With the aid of a telescopic lens we established them as the normal form.

On the way back I filled a sack with a white quartz gravel because I felt species paphiopedilums might do well in it. I tried it with *P. venustum* and since potting it has produced two sturdy growths.

North of Townsville. Between Townsville and Cairns massive areas of *Melaleuca viridiflora* abound, at one stage these hosted thousands upon thousands of *Dendrobium canaliculatum*. These plants were next to the road and naturally the orchids were taken. Combined with annual fires and the need for farmland it is very difficult to find any now. One has to walk a long way in, or find them in places well hidden by shrubs.

Plants grow on either dead trees in fully exposed positions or on live trees on exposed trunks or shaded branches. It is not uncommon to see adult plants and a considerable number of seedlings sharing the same branch. They have small round to large oblong pseudobulbs which store enough moisture to see the plants through dry winter to early summer flowering season.

Flowering starts from early August to early October and are a delight to see in full bloom. Colour is basically white with yellow antlers and a white column and purple labellum. A large number of colour variations exist, variation in the labellum being particularly noticeable.

New laws concerning the collection of native plants place the onus on a person found with them in the wild to prove that he had obtained them legally. I wonder who the real "villians" are? Those who bulldoze or cut down trees laden with plants, or those who collect plants for his own use? I myself would have not hesitated where fallen trees are concerned in attempting to save all I could gather. At least I could rest easy that not all plants were left to die.

We made several trips to the areas north of Townsville, especially to areas where the Electricity Board was clearing trees from alongside power lines. As a result a nice form of *D. canaliculatum* was found. It had normal-coloured antlers but virtually no colour in the labellum. Twelve months later it had responded well to cultivation and flowered magnificently. Our regional judging panel gave it an award of distinction.

There was a creek near Ingham which looked worth checking. It was lined with heavy growth difficult to penetrate but a fallen tree enabled us to cross it. Several plants of *D. canaliculatum* were found growing almost submersed in water and the atmosphere was cool and moist. The host tree had a semi-smooth bark, nothing like the usual melaleuca host.

On this creek we found fine plants of *D. tetragonum* var. *giganteum* and several plants of *Pomatocalpa macphersonii*.

Our last trip was to check an area in the Bluewater District. Here we found *Cymbidium madidum* growing on casuarinas and the interesting thing was that they appeared to be growing on the bark and not in cracks or hollow limbs as is usual. Another find was *Dendrobium monophyllum* growing high on a tall tree which we were able to identify with a high-powered telescopic lens.

Details like wet weather, repotting, moving house and work for the Eighth Australian Orchid Conference have meant that for some months we have had to forego our trips. I miss them because all have been extremely interesting, perhaps not as exciting as finding cattleyas, oncidiums and other showy horticultural types, as in other parts of the world, but then our own species are uniquely Australian and here to be enjoyed.

I am grateful to my good mate Doug Benson who accompanied me on these trips and taught me much about native orchids. My thanks must go to Doug for his company and recording the trips photographically, and in helping to make this article possible.

I hope you can make it to the conference at Townsville on August 28 until September 4 where you will see many of the species mentioned.

18 Patrick Street, Aitkenvale 4814

ENCYCLIA ORCHID CULTURE

W. R. (Bill) JOHNSON

Firstly, the name. The correct pronunciation is En-SICK-lee-uh, NOT En-SIKE-lee-uh. Hawke's *Encyclopaedia* gives us the correct pronunciation and the *Oxford Dictionary* supports it. However, both pronunciations are used, and no doubt will continue to be used.

The name means, literally, to encircle. The name is derived from the Greek en — "in" and kuklos — "circle". Its name is said to describe the manner in which the side lobes encircle the flower's column.

The genus was first established in 1828 by Hooker, and was later amalgamated with the Epidendrum tribe. In 1961, Dressler distinguished them from the epidendrums, and they are now once more known as encyclias.

Encyclias in their distribution range from southern USA (Florida) through the Central American region to South America, with the southernmost occurrence being Brazil.

The cultural requirements for encyclias will vary from species to species, as they occur naturally in a wide range of conditions; their growing environment ranges from hot sea level to some 8,000 feet above sea level in dry but cool mountain forests. Others will grow in tropical deciduous forest. Some require warmth, others will tolerate cool but not frosty conditions. They are epiphytes, and therefore should be grown in coarse bark, or 50/50 bark and charcoal potting material. Drainage has to be very efficient, particularly if they are grown cold.

Generally they like adequate space for their roots to grow freely, and the larger-growing species seem to like a bigger pot. Smaller species such as *Enc. tampensis* will tolerate smaller pots.

During the growing season they like ample fertilizer, a good water supply and plenty of humidity. But once the bulbs have formed, water and fertilizer can be cut back to just enough to stop the bulbs from shrinking. In cooler-growing conditions, it is essential that the plant's pots are allowed to dry out before a frosty night arrives. Using that technique, I have successfully grown and flowered encyclias in a completely cold glasshouse, but the mix must be very coarse and the pots must be quite dry.

The majority of the species have strong perfume, some (usually the most attractive florally), are unscented.

Encyclias mostly flower from December to March, but some will actually flower almost all year round. The fact that some will flower in January and February makes them attractive to those who want to have flowers all year round. Some encyclias flower in just as much profusion as oncidiums, but they have the added attraction of being perfumed. Some on the other hand, produce only a few flowers but then they make up for the reduced flower numbers by sheer size and quality.

Encyclias are not all that easy to obtain, particularly the species, although they are about if you inquire around. With the selfing of good varieties, that scarcity may disappear. Some hybrids are around, and their numbers will increase.

A word of warning on hybrids: One interstate nursery has been selling seedlings for some years with the names incorrect, and this is just being discovered. This may have been accidental in the propagating stage, or the nursery has been supplied with wrongly-labelled seed, but anyway some errors that I have found are, *Enc. alata* x Enc. *altissima* is named *Enc. tampensis*, a species), *Enc. radiata* x *Epi. falcatum* is correctly *Enc. radiata* x *Enc. tampensis*, and I still have some other crosses from the same source yet to flower, so further mistakes could yet be discovered.

Encyclias worth growing are: *Enc. mariae, radiata, altissima, prismatocarpa, cordigera, vitellina, phoenicea, adenocaula,* (syn. *Enc. nemorale*), *cochleata, fragrans, tampensis* and *citrina.* I have given the correct name for each, but they may often be sold under their *Epidendrum* species names, and it may be necessary to check their synonyms before you can locate them. Some synonyms are indicated in this article. When they were placed in the genus *Epidendrum* the specific name, being an adjective, had to conform with the neuter gender of the collective noun *Epidendrum* under rules of Latin grammar. Thus encyclias with names ending in *a* will, if sold as epidendrums, have the specific name ending in *um.*

Now let's look at each of the most commonly available Encyclias in turn:

Enc. mariae: This species occurs at rather high altitudes in Mexico and will grow cool, and even cold if allowed a dry pot in winter. It is small in habit, and presents a spike of three or more flowers, usually in January. Flowers are green and white, and they are the largest of the species. A specimen is a delightful sight.

Enc. tampensis (syn. *Epi. tampense*). Occurs in Florida, USA, and is a small grower, with small flowers which are fragrant. This is an easy to

grow variety. Flowers are extremely variable in colour and shape.

Enc. cordigera (syn. *Epi. atropurpureum*). The variety *'roseum'* is the best of this species. Superb perfume and flowers which are pink and greyish green. Likes a little warmth.

Enc. radiata (syn. *Epi. radiatum*). 25 mm fragrant flowers can be confused with *Enc. fragrans*, and I suspect some seedlings on sale should be *fragrans* crossings and NOT from *radiata*. A little warmth required.

Enc. alata (syn. *Epi. alatum*). Smallish grower, but produces a spike one metre long. Spicy fragrance.

Enc. cochleata (syn. *Epi. cochleatum*). An excellent novice's orchid. Easy to grow, even in cold conditions, so long as it is kept dry on frosty nights. This has no fragrance but it flowers almost all year. It seems to produce two growths a year. Green flower with a black lip.

Enc. vitellina (syn. *Epi. vitellinum*). An orange to fiery red variety. Flowers are larger than most, and somewhat open, but a fine variety. This will grow cool but a little warmth makes it happier. The colour of this species is not dominant unless crossed with species of similar colours. It will produce yellows. One hybrid from *Enc. vitellina*, registered as *E.* Sunburst, is a delightful grey.

Enc. prismatocarpa (syn. *Epi. prismatocarpum*). A creamy yellow with dark purple "warts" or spots on the petals and sepals. Lip is pink and prism-shaped. Upright spike to about 15 inches. Lightly fragrant. Its hybrids seem to retain the same colouring and habit of growth.

Enc. phoenicea (syn. *Epi. phoeniceum*). As the name implies, this is a purple-red species. Has the fragrance of chocolate. Will need some warmth to thrive as it comes from Cuba and the Bahamas.

Enc. altissima (syn. *Epi. hodgeanum*). Four-foot spikes of small fragrant flowers. Some of its hybrids have been seen on our benches now for three years or so, and they are excellent.

Enc. adenocaula (syns. *Epi. nemorale, Enc. nemoralis*). A bright magenta pink, showy *Encyclia*, with a long spike of four-inch fragrant flowers. Species grows in rather dry pine/oak forests in Mexico between 300 and 6,000 feet above sea level. Watch the watering on this one, but it should grow cool.

The main rules for growing encyclias seems to be that the potting material must be open and coarse, with 50/50 bark and charcoal being the best. Give the larger varieties good pot space, and weak fertilizer about every five days when leads commence, continuing until the flower spike appears. During winter months, do not overfeed, and reduce watering so that they are not wet and cold. Feed during winter only if plants are growing, and then be careful not to over-water. They normally grow on trees under a leaf canopy, so keep light reduced during the six warmer months with 65 per cent shade or even 75 per cent. Full winter light won't harm them. Some species grow in deciduous forest areas, so these would take more winter sunlight than others.

I use my fertilizer programme, and the "A" dilution of Aquasol, all year. (See AOR, June 1982, page 109).

The future is wide open for the genus *Encyclia*, and we should see hybrids coming that will have flower spikes like oncidiums, flowers of every colour from greens, yellows, reds, browns, purples etc and most with fragrances to completely fill a large greenhouse. But most of all, we should see clones which will grow relatively cold. All that and flowering in the summer months could only enhance our range of orchids. I have most of the species I have named, and I have begun a hybridising programme. I hope to see the first seedling flower in two years. In the meantime, if you are interested, try a species or two! If you want to read a little more about them, try Hawke's *Encyclopaedia*, the *Manual of Cultivated Species*, and Jim Rentoul's Book No. 2. I haven't listed all the encyclias but all of them have something to offer for us all.

Lot 18 Dandenong-Hastings Road
Cranbourne Rural 3977

Port Macquarie Orchid Society

The inaugural meeting of the Port Macquarie Orchid Society was held in the conference room at the Sandcastle Motor Inn, William Street, Port Macquarie on February 28, 1983.

The meeting attracted 26, a vote in favour of commencing the society was unanimous. It was very encouraging to see 24 financial members registered.

Mrs Pat Jagger was nominated caretaker chairperson. Mrs Miriam Graham was nominated caretaker secretary/treasurer. With a steering committee of six volunteers their aim will be to bed the society down for the next few months. The annual general meeting will be held in June.

Before settling in Port Macquarie 2½ years ago Pat had been a very active member of several societies in Sydney. She had received many requests to form a society but due to family and business commitments Pat has had to wait until she felt confident the time was right before meeting the challenge.

The Port Macquarie Society meets on the fourth Wednesday in the month, venue Masonic Lodge Hall, corner Grant and Burrawan Sts, Port Macquarie at 8 pm.

The Port Macquarie Orchid Society extends a welcome to all orchid society members visiting the area.

Caretaker chairperson Mrs Pat Jagger — phone (065) 83 4480. Caretaker secretary Mrs Miriam Graham — phone (065) 83 1552.

Australian Raised Odontoglossums

GERALD McCRAITH

Hybrids in the *Odontoglossum* alliance would be one of the most colourful of all the cultivated orchids. In the past five years, the Foundation has produced over 700 flasks of hybrid seedlings of the *Odontoglossum* alliance with many hundreds of seedlings. I wish to advise that the names below have been registered, and that several are waiting confirmation. The names below will assist many growers to put a grex name to the seedlings that they have successfully grown. It will be noted that Victorian place-names are featured in these registrations:—

Odontioda

June Geraldine	*Odm.* Ostro x *Oda.* Actrix
Mallee	*Odm.* Hyrastro x *Oda.* Actrix
Wimmera	*Oda.* Matanda x *Oda.* Haniesto
Port Fairy	*Oda.* Michie Donning x *Oda.* Haniesto
Michelle	*Odm.* Tontor x *Oda.* Trixero
Red Hill	*Odm.* Egide x *Oda.* Brocade
Gippsland	*Odm.* Claripheon x *Oda.* Michie Donning
Ellen Pearl	*Oda.* Florence Stirling x *Odm.* Moselle
Warrnambool	*Oda.* Philomel x *Oda.* Aloette
Apollo Bay	*Oda.* Ray Buckman x *Oda.* Aloette
Maribyrnong	*Oda.* Flocalo x *Odm.* Hyrastro
Doutta Galla	*Oda.* Aloette x *Odm.* Hyrastro
Kerryn	*Oda.* Brocade x *Odm.* Tontor
Swan Hill	*Odm.* Susan Smith x *Oda.* Pumari
Albert Park	*Oda.* Fremar x *Oda.* Pumari
Royal Park	*Odm.* Ostro x *Oda.* Pumari
Yarrawonga	*Odm.* Marquis x *Oda.* Ray Buckman
Murrumbeena	*Oda.* Matanda x *Odm.* Gavotte
Ballarat	*Oda.* Ray Buckman x *Odm.* Gavotte
Bendigo	*Oda.* Actrix x *Odm.* Quisto
Mildura	*Oda.* Michie Donning x *Odm.* Purpleon
Geelong	*Odm.* Torpesco x *Oda.* Haniesto
Lakes Entrance	*Oda.* Matanda x *Oda.* Red Rum
Belinda Dixon Ward	*Odm.* rossii x *Oda.* Florispum
Castlemaine	*Oda.* Marcris x *Oda.* Florispum
You Yangs	*Oda.* Matanda x *Odm.* Purpleon
Maroonda	*Oda.* Helen Stead x *Oda.* Aloette

Odontoglossum

Ararat	*Odm.* Jerome x *Odm.* Hyrastro
Lois Joy	*Odm.* rossii x *Odm.* Moselle
Fiona Humphries	*Odm.* Hyrastro x *Odm.* Purpleon
Pascoe Vale	*Odm.* Tontor x *Odm.* Jerome
Puckapunyal	*Odm.* Royal Ballet x *Odm.* Tontor
Moonee Ponds	*Odm.* crispum x *Odm.* Susan Smith

Vuylstekeara

Ascot Vale	*Vuyl.* Jewellene x *Oda.* Haniesto
Mount Dandenong	*Vuyl.* Bradena x *Odm.* Tontor
Mount Macedon	*Odm.* Jerispol x *Vuyl.* Jewellene
Yarra Yarra	*Vuyl.* Essendon x *Oda.* Pumari
Moonee Ponds	*Vuyl.* Essendon x *Oda.* Boheme
Yan Yean	*Vuyl.* Essendon x *Oda.* Fremar
Melissa Jackson	*Milt.* spectabilis x *Oda.* Matanda

The breeding programme has concentrated on good form flowers, with the object of maintaining reasonable size. Attention has been given to improving the labellum which has been a weakness in many modern crosses. Novelty types and experimental crosses have been kept to a minimum.

Apart from supplying good modern crosses at good value, these Australian raised odontoglossum hybrids have the advantage of not having the handicap of the quarantine procedures, and the lapse of time because of the change of seasons of the opposite hemisphere.

Many of the Australian raised seedlings have flowered within two years from deflasking, and this is another added advantage with this genera.

The directors of the Foundation are appreciative of the many who have assisted in this project in promoting these colourful orchids to the Australian orchid growers, while in the same vein, it has been a very practical method in attracting funds to assist the work of the Foundation.

The odontoglossums are the most colourful of all the Orchid genera and I take pleasure in their promotion to those in the southern parts of Australia and New Zealand.

The Foundation wishes to acknowledge Mr Jim Mackinney, Mr Frank Slattery, Mr Bob Hodgins and Mr Athol Bell for the efforts that they have expended in this rewarding project.

There will be a new release of flasks about late May or early June, these will be available from:—

Mr Jim Mackinney	87 Turton Street, Sunnybank Qld. Phone 345 1916
Mr Frank Slattery	12 Eddystone Road, Bexley NSW. Phone 50 7985
Mr Bob Hodgins	PO Box 108, Frankston, Victoria Phone 787 5554
Mr Athol Bell	PO Box 61, Berowra, NSW Phone 456 3453
The AOF	C/- 107 Roberts St, Essendon Phone 379 3570

GROWING COELOGYNE MASSANGEANA

Horrie Foster-Johnson of Maroondah OS grows his *Coelogyne massangeana* to perfection. His recipe is to establish it in a basket and keep it in a warm house which has a minimum temperature of ten degrees celsius. He suspends it from the roof where it gets no sunlight. A fine cattleya mix is used as this holds the moisture. Watering is every second day, and it is fertilized about every two or three months.

Maroondah OS Bulletin

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know you will feel the same pleasure in quality from the outside and greater excitement with the quality and health of our seedlings. We are more than happy with all the genera and their development this year and in the next Orchid Review we will show you again both colour and quality in orchids.

New season has commenced, first on Saturday 9-5 and from the first weekend in June, seven days a week, from 9-5. Our friendly and courteous staff always ready to welcome you and offer any advice on the growing of your new seedlings, and any help with improving your growth and flowering of existing orchids.

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DON'T USE GREEN FIBREGLASS!

RONALD KERR

Abstract. Plants need the red and blue wavelengths of light in order to photosynthesise and grow. The visual colour of plastic or glass is not a reliable guide to the reflective and absorption power of the material. Nor to the amount and quality of light transmitted. Green pigments in fibreglass have a yellow and blue base. The yellow pigment absorbs blue light and the blue pigment absorbs red light. Thus green fibreglass means that plants will get insufficient light.

Very occasionally, fortunately, I have seen growing houses constructed of green fibreglass. Some otherwise experienced growers advocate its use.

Green is the colour of nature, they say. Leaves absorb the red and violet end of the spectrum and reflect the unwanted green. Therefore it is logical to use green fibreglass.

I remember when fibreglass first came on the market, reading an article from someone at a South African botanic garden complaining that fibreglass was no good because plants grown in a trial fibreglass house were not doing well. The fibreglass was blamed not the colour which happened to be green.

Through the mistake of a tradesman one of our Australian public gardens found itself with a green fibreglass house and a shortage of money to replace it. The difficulty with poor growth was not largely overcome until every second sheet could be replaced with clear fibreglass.

Why is an idea which looks superficially attractive really bad?

A physicist will not need to read further. However, for we less exalted mortals, an examination of the principles involved can help us in the growing of orchids. If you have a green fibreglass growing house this could be the most important article you could read this year.

Green plants depend for growth on light, carbon dioxide from the air, and minerals and water absorbed by the roots.

The parts of the light spectrum used by green plants are the red and blue ends.

Of the range of energy emitted by the sun, light is that portion containing spectra which we can see. It passes through space in waves and the length of a wave determines its characteristics. The light spectrum has wavelengths between 400 and 750 nanometres. A nanometre equals 10^{-9} metres, or 0.000 000 001 m, which is very small indeed.

In 1704 Newton showed that a prism separates a beam of light into spectra of seven colours. These merge into each other. A range of nanometres as shown in the brackets after each of the seven colours below indicates this graduation in wavelengths. The range is Red (750-620 nm), Orange (620-590 nm), Yellow (590-580 nm), Green (580-500 nm), Blue (500-460 nm), Indigo (460-450 nm), Violet (450-400 nm). Spectra may also be expressed in Angstrom units.

A prism, or factors such as water droplets in the atmosphere, will cause the wavelengths to split so that each creates a different impression to our sight. This splitting is due to the refractive indices being variable. In other words each wavelength passes through the refracting agent at a different angle, the deviation being greatest for violet.

Incident light is that which strikes the surface of an object. If all of this is reflected we see the surface as white. Should portion be absorbed the remaining wavelengths are reflected and we see them as a colour.

The plant's needs. Chloroplasts are units in plant cells which contain the chlorophyll, a pigment which absorbs light energy. It appears green because this portion of the colour spectrum is not needed in photosynthesis, the process in which the chloroplasts split the hydrogen from water and reject most of the oxygen through openings in the leaves called stomata. The latter also absorb carbon dioxide.

In experiments plants have been exposed to red light only and in general have tended to grow elongated and weak. When exposed to blue only they become stocky and compact.

The short wavelengths have the greatest energy. Fortunately, the quite powerful and invisible ultra-violet waves which can destroy living tissue (sunburn is an example), are largely stopped by atmospheric haze. Glass also inhibits their passage, but some plastics, unless specially treated, absorb them and this shortens the life of the plastic.

The light energy via the agency of chlorophyll combines with carbon, hydrogen and nutrient minerals to produce first adenosine diphosphate, then by adding one more phosphate group, adenosine triphosphate the energy factor in all life forms. This process is known as phosphorylation and it results in the storage of energy in the plant as organic phosphates and ultimately as carbohydrates.

Carbon is fixed by thin-leafed orchid species

during the day, those with succulent leaves use another carbon pathway at night. The latter are usually those where some stress occurs in their habitat.

Leaf proteins called phytochromes are activated by the far red end of the spectrum. Phytochrome is the factor in photoperiodism which controls the plant's tendency to grow in the direction of light, and to open and shut stomata. It also controls the plant's annual cycle by its response to long or short nights. Hence species are sometimes referred to as long and short-day plants. Thus phytochrome is important in influencing flowering, and it is an ingredient in the viability of seeds.

The above is a very brief account of the immensely-complicated biochemistry of plants. It deliberately avoids the complexities of chemical reactions and DNA. Its purpose is to establish that both the red and blue ends of the light spectrum are essential to orchids.

Due to the wide divergence in the environments where orchids have evolved there will be variations in light requirements. Which is one reason species growers have to pay particular attention to the ecology of each species. But these variations are almost invariably in degree rather than kind.

It is time to look at the structure of green fibreglass.

Structural characteristics. It is not necessary to know the precise composition of fibreglass panels as this will vary with different manufacturers. However the principles involved will ensure that variations are only in degree. For instance, the nature of the colouring material, if any, will vary, as may the thickness and type of resin, and the effect is to allow more or less light transmission. The quality and durability of the medium, whether it be glass, fibreglass, or any other transparent material, is also an important factor in determining not only the light transmission when new but what it could be at intervals of time.

A clear, transparent object allows nearly all the incident light to be transmitted through it. If the same material is coloured it will only allow light not affected by its colour to pass.

At this stage it is important to realise the distinction between additive and subtractive blending of light. Should the light split by a prism be subjected to removal of the prism it will recombine into invisible or so-called "white" light. "White" because all the frequencies are reflected by a surface which lacks colour.

The physicist expresses all the high frequencies as blue, the middle ones as green, and the lower ones as red. These he calls primaries and by assigning the symbols x, y and z to each it is possible to express a precise colour of light by a percentage of any two of these trichromatic coefficients. Thus $x + y + z = 1$ or white light.

However with pigments a subtractive principle applies. The subtractive primaries are generally referred to as red, yellow and blue because this combination works best in practical applications.

If pigments in these colours are mixed in equal amounts they produce a black. In other words all light is absorbed.

The colour loosely called blue is correctly a blue-green, often referred to as cyan, a colour which absorbs red light. Red pigment, more correctly magenta, absorbs green light. Yellow absorbs blue.

Unlike additive mixtures the characteristics of a subtractive colour are difficult to assess from its components. Colours made from pigments and dyes are usually denoted by a code of the Munsell system which is virtually a scientifically-based range of colour samples in which pure colours, or chroma, are blended with ascending degrees of white (tints) or black (hues).

Pigments and/or dyes are used in paints and inks. In colour printing the image in an illustration is made up of dots in various sizes. The smaller the dot the less ink it will carry. What we see as green in the print is a mixture of blue and yellow dots. A pocket glass of ten magnifications shows this clearly. In most printing by modern offset lithography the dots are formed by screens of fifty-four or sixty lines per centimetre. Two line screens at rightangles to each other are used in front of the camera lenses. By using colour filters a negative is made for each colour. A light primary colour on the original is picked up as a small dot on the negative, and a dark colour as a large dot. In quality work a black image is also used to increase sharpness and subdue harshness.

Thus incident light striking a coloured transparent or translucent surface is subject to the laws of absorption and reflection governing pigments or dyes.

Polyester resin can be readily made into clear or coloured sheets if reinforced with glass fibres. It may be corrugated for additional strength. To colour it either dyes or pigments may be used. Green dyes are not particularly stable and are seldom used. Where they are the same principles apply as for pigments.

Green pigments may be produced in various ways. The very stable chromium oxide green (Cr^2O^3) has the effect of absorbing red light. It is also expensive.

Another product, known as chrome green is a blend of iron blue and chrome yellow. Iron blue is

a generic term for pigments derived from ferric ferrocynides. Other yellows are derived from zinc and cadmium.

Chrome green is probably the agent used in green fibreglass, but whatever is used the effect is the same. Two pigments are distributed through the fibreglass, intermingled like the dots on a printed illustration but also in the full depth of the medium.

A law of physics states: "When two pigments are mixed the resulting colour is the one absorbed by neither".

With green the yellow component absorbs blue, indigo and violet. The blue particles absorb red, orange and yellow.

This law may be tested by shining a light which lacks the middle wavelengths of the spectrum on a green surface. It will appear to be black.

Of course in fibreglass the pigments may not be dense enough or the product thick enough to stop all light, but due to the variation in specific gravity of the two pigments any light transmitted will be in different spectral ratio to normal light.

Unfortunately the effect of light starvation on plants may not be apparent for some time — even two or three years.

Light absorbed by the colouring pigments is converted to heat and dissipated. Over a period it will darken the glass fibre reinforcing. The result is that any transmitted light permitted by a wide dispersion of pigments is reduced still further.

Scattering of light. There are corollaries to the above which are important in the growing of orchids.

As mentioned the blue wavelengths are the shortest and they contain the greatest number of photons, the energy factors in light. On entering the earth's atmosphere light ceases to be in a vacuum. Consequently the atmospheric molecules of air and water vapour scatter the light spectrum, the more forceful blue portion at about nine times the rate of the red and yellow. This is why the sky appears blue.

Because the sun is vastly larger than the earth its light reaches the earth in parallel rays. When it is noon at any point the light is approximately at a right-angle to that point (subject to the earth's tilt creating seasonal variations). Consequently at noon light has the least depth of atmosphere to traverse. But at points 90° east and west of noon, sunrise and sunset, light must travel through twice the amount of atmosphere. This often absorbs all the blue light and reflections on clouds appear as red and yellow sunrises and sunsets. The sky near them may appear greenish. At sunset on heavy atmosphere days, particularly if there is dust in the air, the sun will appear larger and it will be possible to look directly at it.

The blue light is as important to the plant as the red and its daytime metabolism cannot be fully active without it. Therefore siting of growing houses to get morning light as soon as possible is essential for the optimum growth of most orchids.

Increased blue light will become gradually available as morning advances, and, all other factors being favourable, the plant will be at its most active before mid-morning. This is the best time to use foliar fertilizer.

Conversely, from mid-afternoon the amount of blue light reaching your piece of earth gradually decreases. A good general rule to follow is that watering is best done when the full light spectrum is present. Where a cool night temperature is necessary to induce flowering water after the sun goes down and only on very hot evenings. Just enough watering should be done to ensure a temperature drop. In a mixed collection such watering will need to be selective because not every genus requires this marked difference between day and night temperatures. Cymbidiums in warmer districts would be the main genus requiring this temperature drop and for this reason they are best kept to a growing house of their own. If this is not possible keep them to a section of the house where they can be watered separately.

Suffused light is best for most orchids and here shadecloth has proved invaluable. Green shadecloth does not affect orchids like green fibreglass because it is white light which penetrates its interstices.

A commonly-used method of suffusing light is to paint a glasshouse with white paint based on lime which theoretically will wear off by summer's end. A clear vehicle such as water and size is used to hold the pigment. The lime pigment may reflect more light than it diffuses and will act as a scattering agent in the same way as the atmosphere, and consequently will reflect most or all of the blue light. If the sun appears red when looking through a white-painted glass roof then there is too much paint for the good of your plants.

What to use. Control over light in a fibreglass or glass growing house is best provided by starting with a clear material and suffusing the light with a cover of shadecloth about 30 cm above the glass or fibreglass. Shade intensity will depend on whether you live in a temperate or tropical area and on the genera you grow. Shade may be varied over different parts of the house by using different shades of shadecloth if you have a mixed collection and desire a wide range of microclimates.

Shadecloth above the glass has the added advantage of providing a cool buffer layer of air

over the glass and ensuring a more even temperature within.

An alternative to clear plastic or glass is purple which absorbs the middle of the spectrum but transmits violets and reds. A pale purple or mauve is available in some brands. However, it is advisable to play safe and keep to the clear with a shadecloth, particularly in cool temperate and high-altitude areas where it is an advantage to remove the shadecloth in winter.

References

Basic physics. Martin and Connor. Whitcombe & Tombs Pty Ltd.

Orchid Biology Volume II. Arditti *et al.* Cornell University Press.

Nature's use of colour in plants and their flowers. J. & S. Proctor. Cassell Australia.

The world of plants. Encyclopaedia of life sciences Volume III. Published by Doubleday, New York.

Dendrobium crumenatum

This species was first described by Olof Swartz in 1800 when establishing the genus *Dendrobium*. Writing in *The Orchid Review* of February 1893, Major-General E. S. Berkeley says of them: "Every plant in the same district is suddenly discovered to be in flower on the same day, but a few days later not a solitary flower remains. Very pretty they look when seen in quantity, growing on scrub jungle. Many a bush is found lit up with them, and their sweet scent pervades the air. They are not easily seen when out of flower, so that the quantity takes the traveller by surprise.

"It's a pity that the flowers last such a short time, as, being white and sweet-scented, they are very attractive. On observing them critically in the Malay Archipelago I found that the plants flowered throughout the year at intervals of about six weeks. It is extremely abundant in Singapore, where it is known as the 'Pigeon Orchid', an allusion to the shape of its flowers.

"The inland form found in Burma is not worth growing, both plants and flowers being too small. The Ceylon and Malayan varieties are well worth a place in the orchid house, especially the Ceylon form which is very compact in habit. These plants are easy to grow, and thrive best in the India house, in a teak hanging basket. They require no resting season."

To which might be added that they grow very well in the Australian tropics but require a warm growing house in temperate areas. Flowering is initiated by a marked temperature drop.

HELP FOR BUSHFIRE VICTIMS

Many societies from all over Australia either made donations direct to Victorian and South Australian Bushfire Appeal Funds, or offered assistance to orchid societies in the affected States.

At the February meeting of the Victorian Orchid Club members contributed $570 as a contribution to the State Bushfire Appeal.

The carbon cycle begins with the fixation of atmospheric carbon dioxide by the process of photosynthesis, conducted by plants and certain micro-organisms. In this process carbon dioxide and water react to form carbohydrates, with the simultaneous release of free oxygen, which enters the atmosphere.

— B. Bolin in *Scientific American.*

Terrestrials at Adelaide Gardens

An Australian native terrestrial orchid house at the Adelaide Botanic Gardens is now complete. Construction was made possible by a grant of $1,000 from the Australian Orchid Foundation and aided by the efforts of members of the Native Orchid Society of South Australia.

NOSSA suggested the project and for the past twelve months has worked on establishing pots of plants for display. Nearly forty species and two terrestrial hybrids have been established in 18 cm squat pots already.

The house is 5.5 m x 3.7 m and over two metres high so there is plenty of room for more pots.

Plants on exhibition at the moment are mainly South Australian species and NOSSA members are anxious to extend the range to include plants from all States. Making the range of genera as wide as possible will ensure that there will always be some plants in flower.

This marks the first time in the world that a botanic garden is able to display Australian terrestrial orchids so the general public can see and appreciate them.

NOSSA invites contributions of tubers from local and interstate friends to help enhance the value of this unique collection.

Write first to the honorary secretary of NOSSA, Mr E. R. Hargreaves detailing the tubers you have available. Mr Hargreaves will let you know whether any you mention are already in good supply. His address is 1 Halmon Avenue, Everard Park, South Australia 5035.

The Adelaide Botanic Gardens maintains two areas, the historic city one, and a new one in the Adelaide Hills. Interstate visitors should make a point of seeing both.

OBSERVATION IS EVERYTHING

In the April *North Shore Orchid Bulletin* Editor Jim Cummings points out that there has been a flush of orchid blooms, due no doubt to the prolonged, warm, summer days. Coupled with this, unfortunately, is an incidence of bulb rot and diseases associated with heat and high humidity. Alternately this unusual weather gives us a chance to observe which of our orchids revel or shrivel in these conditions. Owning a large collection of mixed genera becomes a constant battle to adjust either the growing conditions or move plants to suit the changing conditions. Observation is everything, common sense should be a natural if one is to be a successful grower.

Thanks Jim. Need we point out that Jim is one of the North Shore's outstanding growers.

Since the time of Charles Darwin, the goal of much of systematic biology has been the determination of the evolutionary relationships of organisms.

— R. and M. Schmid in *Orchid Biology I*

Pots — keep a good supply

ERN PAULEY

Acknowledgements to Parramatta OS News

Containers or pots (as we will now call them) have quite a big bearing on how well you grow certain orchids.

Quite a few growers still prefer terracotta, while others find there is not much to choose, as plants that are healthy and well looked after grow equally well in plastic.

One advantage of terracotta is they dry out well, as the excess moisture is drawn out through the sides as well as the bottom. This is an added advantage during winter months as the pot, with a morning water, is completely dried out by nightfall. With plastic there is no venting of excess moisture through the sides, so particular attention has to be paid to drainage. In winter months, plastic pots should not be watered in the evenings, far better to miss out altogether and wait for the following day to catch up.

Quite a big item that makes a grower lean to the choice of plastics is price. We have a quantity of slotted terracotta of varying sizes bought before the ugly word inflation came on the scene and to replace them at today's prices would be prohibitive. They are kept for the better cats and when a big plant has outgrown its pot and divided, some of the divisions are potted into plastic and the pieces that are to be kept are potted into the slotted terracotta. The old pot is put aside and thoroughly cleaned before using again.

A disadvantage with terracotta is that the roots cling to the sides and are hard to dislodge without some root damage. When terracottas were cheap, rather risk damage to these roots, the pot was broken, but when you are looking at prices that range from 60¢ to $1 and over for a replacement, one hesitates to use a hammer.

When a plastic pot is used enlarge it at each vent hole for additional drainage. This is very important as most plastics have a small ridge that holds water and forms a wet sump in the bottom of the pot.

When buying plastic pots check the type of drainage that is used. Some makers turn out a type of pot that allows very good drainage and can be used without any additional work on the pot. Some have domed bottoms that are an asset to good drainage.

But whatever make of pot you choose, make sure these vents do not clog up, drop into the pot at least a handful of loose medium that ensures a free flow of excess water.

Buy your pots in quantity and store them in cartons as a pot which can be bought for 10¢ today, in a month's time you could pay two or three cents more. They store well and do not deteriorate.

Stock up with all the different sizes for your repotting as it is bad policy to use big pots for small plants. You will be using more potting mix than you should and over-potted plants do not seem to grow as well as a plant that is potted according to its size. Growers pay big prices for plants, then when it has to be divided quibble about the 15¢ to 25¢ they have to pay for containers that will ensure that a plant grows well and flowers the following season.

Those who have purchased community pots, whether catts or cymbids will find they grow-on better if they use the small square pots as the first move after taking them out of community pot or raft. This allows the small plants to be placed close together, thus saving bench space. When they have outgrown the small square pot put them in a size that will allow them to mature and bloom. Always let a plant fill out the pot before moving to a size larger.

The pots that have been used are still good property and after cleaning out all old mixture, washed and dipped in a fairly strong solution of bleach, dumped in a clean bucket of water to remove bleach, dried and stored for further use.

Keep your pot sizes regular. For catts I use 115 mm, 140 mm and 175 mm squat. For miniature cymbidiums the same size but a much deeper pot. Most standards go into 20 cm black plastic with a few into 25 cm.

Have a "pot-walloping" session now and again and it will surprise you how many pots you can collect from odd-corners of the potting shed or odd-corners of the shade-house.

Ansellia africana

Mrs Sheilah Wilkins has received a special commendation from the Burnie Orchid Society for the culture of her *Ansellia africana*. Mrs Wilkins has had her plant for six years and grew it from a seedling. It has flowered for the last three years. Her compost is mostly charcoal, but otherwise she treats it as she treats her cymbidiums.

In nature it is a forest plant and therefore likes shady and humid conditions. Temperature should be intermediate.

Close-up flower photography

TONY PEPPER

From a lecture by Mr Pepper reported in the Grafton Orchid World.

Mr Tony Pepper was responsible for the two fine photos of Mr Norm Pearson's soft-cane dendrobiums which appeared on page 40 of the March issue. For those folk not familiar with diopter lenses this description is a useful introduction.

If you have a single-lens reflex with standard lens (50 mm) to take close-up pictures of your orchids, you will need:—

Close-up lenses. By far the easiest equipment to use is a close-up attachment which screws on the front of the lens and works rather like a magnifying glass. No change in exposure is required and they will focus down to about 10 cm, close enough for most of your requirements.

They are generally available in three strengths marked +1, +2 and +3. This refers to their strength in *diopters*. One diopter focuses at 1000 mm, two at 500 mm, three at 333 mm, and so on. They always focus on their dioptric focal length whether on a 50 mm or 135 mm lens or any other lens. They can also be used together. Always put the stronger on the lens first, eg +3 and +2 combined become +5 and will focus at 200 mm.

Viewing and focusing is very critical, and it is easier to do the final focusing by moving the camera backwards and forwards.

Depth of field is very restricted, often only a few millimetres, and it is essential to close down to the smallest practical lens apertures, f8, f11 or f16. Also to choose a viewpoint that will keep the subject in as flat a plane as possible and focus on a spot that is about one-third of the depth of the flower. Always try to take close-ups in good light. In strong sunlight use a reflector to lighten shadows. Watch the background: if 'bitty', a dark card is useful.

Exposure. A close-up exposure reading will often be incorrect, particularly if subject is white or very dark. Take a reading from a grey card or back of hand held in same light as subject.

For light flowers underexpose about half a stop. For dark flowers, overexpose about half a stop.

Look for flaws or blemishes in subject. A soft brush will remove dust or natural debris from a plant. Movement of subject or camera is fatal in close-up photography. A small windbreak and the use of a tripod will help.

Flash. In poor light, flash is essential. The flash unit will have to be mounted on camera in such a way that it can be directed towards the subject. Brackets are available for this. It is, however, possible to make a bracket suitable for the job.

A reflector is again useful to lighten the shadows.

The correct exposure will have to be found by trial and error, so keep notes of what you do.

I have made some tests using typical equipment: a 50 mm lens plus a three-diopter close-up filter using 100 ASA film, plus a small, low-powered electronic flash unit with a guide number of 14 metres (44 in feet). If you are using a computer flash set it to manual.

For a lens focused on infinity the correct stop is f22. If focused on one metre the correct stop is between f16 and f22.

With 100 mm macro lens between .45 and 1.0 metres the correct stop is between f11 and f16.

These results will act as a guide for your first tests.

MAROONDAH'S NEWCOMER GROUPS

The Maroondah Orchid Society, centred on an eastern Melbourne suburb, makes special efforts to help new growers. This year 49 new members have been split into three groups for extra help in getting established.

Each group has growers of about the same experience. Host growers entertain a group, generally on a Sunday afternoon, and the newcomers are given demonstrations of culture and growing-house management. A group leader arranges a programme of visits and instruction. Definitely an idea other societies could follow.

The extent to which these groups are appreciated by members is indicated by a letter published in the *Maroondah OS Bulletin*. It was written by Sharon Lewis and is published below:—

"I would like to say that during 1982 I visited five homes with my newcomers' group and found these visits very enlightening. All of the hosts were helpful in answering questions and sharing their knowledge with us. I'm sure the rest of my group would agree that the newcomers acquire a lot of valuable information and advice on orchid culture from attending such visits whilst also occasionally gaining practical experience in repotting, etc.

"Our quest for knowledge on this subject has been made so much easier by belonging to a club like MOS whose friendly experienced growers are prepared to open their orchid houses and willingly pass on their hard-won knowledge to us invading beginners.

"My personal thanks goes to these people for their hospitality and friendship."

Well spoken Sharon.

EVEN BUCKETS CAN BE BEAUTIFUL

The culture of *Coryanthes speciosa*

JOHN WOODWARD

John is Editor of the "Tasmanian OS Bulletin" in which this article first appeared.

Coryanthes speciosa, 'The Bucket Orchid' is one of the most widely grown of orchid plants — widely grown, that is, by ants of the genera *Camponotus* and *Azteca*. Not Argentine ants but northern cousins who inhabit the orchid's natural habitat through Panama, Venezuela, Peru, Colombia and Brazil.

There are at least fifteen species of the genus *Coryanthes* and the plants are usually infested by belligerent ants that nest among the roots. The plants are painful subjects to collect and still more painful to transport.

P. H. Allen writing in 1949 said that plants seldom thrive in cultivation; Dr George Kennedy writes that they are the most fascinating and complicated of all orchids —unique. Hawkes said they are extraordinary, unique, complex, rare in cultivation and do not thrive in collections.

Always one to take up an orchid challenge and presented with the opportunity to acquire a small seedling of *Coryanthes speciosa* a few years ago, the writer duly received the plant from quarantine potted up in the ever-versatile sphagnum moss. The plant had obviously done quite well in the moss which (after a few months) was a little past its prime. It was a busy time so the usual rule of — if in doubt leave alone or, if in moss, renew it — was followed. A quick check somewhere or other to find growing temperature and out into the miscellaneous house with the cattleyas, phalaenopsis, paphs and others. The leaves were of a type similar to lycastes so moderate light was given and the plant hung (expecting pendulous spikes!) beneath worn fibreglass with a southerly aspect.

The usual care and attention was given to this precious plant — it received the same treatment as everything else — watered well in summer (and fertilized too with a high nitrogen mix — most other plants were in bark), kept a little dry in winter — the moss did not grow — it rarely does for me but is replaced every six to 12 months.

The plant thrived and in 1981 (late Spring) produced the first spike. Buds swelled and just before they opened, they turned to gel. So much for overhead watering, cool air drafts or high humidity. By now the plant had many bulbs — certainly a good grower and natural greed took over. From time to time divisions were taken, potted, established and sold. The plant continued to grow more bulbs and in Spring 1982 produced two spikes. A little closer care was given and each raceme flowered in turn with two buds apiece.

The first flowers were out and finished before I had time to drop the work programme with cymbidiums so I resolved to keep the camera ready and a few toothpicks for the next spike. I came in for lunch one day and noticed the buds had reached a good size but saw no sign of cracking. By the time I had finished the midday meal, it was almost too late to photograph the sequence of the flowers opening. An afternoon with the camera recording the progress every fifteen minutes produced some rewarding results and after a few days, the flowers were pollinated. Two nice pods are developing well so there is now hope for a wider distribution of the species in years to come.

The excitement of these unusual blooms inspired a little further reading on their culture, if only to answer the question of "how did I manage to grow and flower a plant that others have found so difficult and moreover the plant seems to go from strength to strength?"

Dr J. A. Fowlie found that formic acid secreted by the ants has a pH of 3 — implying a very acid compost is required — usual bark or osmunda composts soon kill the plants. He found that Palco wool (redwood bark fibres) kept extremely wet worked well. This would be similar to the stringy pine bark available here.

M. R. Herbert writing in the *English Orchid Review* (January 1980) was unable to obtain Palco wool so watered his plant with dilute formic acid to simulate the natural conditions of the arboreal ants' nests. He found that as the plants originate in a very wet and humid area, they should have similar conditions in collections. While tolerating low temperatures of 12°C (54°F), they appreciate more heat. Formic acid is very corrosive and, like the ants, gives off a most unpleasant odour. Hawkes stated that, as the inflorescence is pendulous, growth in a basket, on a raft or on a slab was obligatory.

Well, I didn't use Palco wool, formic acid or a basket/raft/slab; no extra water or humidity was provided but temperatures a little above the suggested minimum were provided.

The answer appeared to be that by growing in the sphagnum moss-filled pot, the plant seldom

dried out (kept wet), humidity was provided by the damp moss, the moss itself is acid (though not unusually so) but my "everything gets the same" rule ensured that, by giving the moss and the plant a high nitrogen feed used for plants in bark composts, I unintentionally provided a more acid medium than was intended. The moss also allowed the plant to sit higher in the pot and flower spikes emerged and grew across the medium and over the side.

The structure of the floral segments to ensure pollination by the bees of the areas in which coryanthes grow is what provides the real incentive to grow the 5-7 day flower. Coryanthes are related to the stanhopeas and belong to the family which include gongora, peristeria and houlletia among others. In basic terms, the flower forms a bucket shape with wings that serve little purpose other than to enclose the bucket in the bud-formation stage. On opening, the bucket is filled with a watery fluid that drips from two glands at the base of the column. Bees are attracted by the fragrance exuded by the bloom, land to feed on a large globular membrane, lose their footing or become intoxicated and fall into the water-filled bucket. The only exit is a small hole between the bucket and the pollinia or pollen cap and some force is required for the insect to squeeze through. The pollen is detached in the process and adheres to the back of the bee and is carried to the next bucket visited.

For beauty, challenge and sheer intricacy — try a coryanthes if you dare!

PO Box 72, Kingston, Tasmania 7150

Coming International Events

11th World Orchid Conference. Miami, Florida. March 5 to 12, 1984. Enquiries: PO Box 59-5150, Miami, Florida 33159.

8th Australian Orchid Conference. August 28 to September 4, 1983. Townsville, Queensland. Details elsewhere in this issue.

British Orchid Congress 1983. October 29-30. City of Norwich, hosted by the Orchid Society of East Anglia. For details contact Mr A. J. Towler, 62 Queens Road, Wisbich, Cambs, England.

RHS International Centenary Orchid Conference. RHS Halls, Westminster, London, March 21-24, 1985. Details from Royal Horticultural Society, PO Box 313, Vincent Square, London, SWP 2PE, England. Associated with 7th European Orchid Conference.

German Orchid Congress and Show. September 30 to October 2, 1983 at Neu-Ulm.

France. Show at the Parc de Vincennes, Paris. March 1984.

14th Swiss Orchid Show. November 17 to 21, 1983 at Berne.

Santa Barbara International Orchid Show. Earl Warrne Showgrounds Exhibition Building, March 30 and 31, April 1, 1984.

8th Tasmanian Orchid Conference

This year the Devonport Orchid Society is the Host Society. They promise it will be something very special.

Events will take place over the weekend September 30 and October 1.

The venue is Maidstone Park, Spreyton where activities will be held in the Football Rooms. Conference registration is $15 single and $25 double, and the dinner $10 each.

Conference theme is unusual and centred on the high "Cs". "C — for Conference, C — for Celebration, Celebrate with Orchids". Show exhibits are to show some aspect of celebrating with orchids.

Especially interesting will be a trip to the Sir Henry Somerset Orchid Reserve under the guidance of Peter Tonnelly. Peter initiated the setting up of the reserve on land graciously donated by Australian Pulp and Paper Mill Ltd. It contains a unique range of terrestrial orchids, some of them very rare. Many should be in flower at conference time.

A hospitality committee has been formed to ensure that all registrants have no details to worry them. Mainland visitors are particularly welcome. Spring is really rampant in early October making it a wonderful time to visit Tasmania.

To register and for further information contact the Devonport Orchid Society's very active secretary Mrs Gwen Smith, Kindred, Tasmania 7310.

21 candles burn at Burnie

The Orchid Society of North-Western Tasmania celebrated the twenty-first anniversary of its foundation on May 6.

The occasion was marked by a "Dinner Meeting" at Hellyer College, Burnie. Well-known species grower Graeme Carr came from Victoria to be guest speaker at the dinner.

Life members Mr and Mrs Henry Miller and the nine other foundation members were invited as special guests. Many members of other Tasmanian societies attended.

The society's activities over the years include many splendid shows, interesting meeting nights and happy social occasions.

Bush picnics, during which compost is collected, are held prior to potting time.

To join this important society phone president Margaret Nutting on Burnie 31 5849.

The first orchid hybrid

Calanthe Dominii, raised by John Dominy at the Exeter Nursery of Messrs Veitch and Sons, was the first hybrid orchid produced by artificial cross-fertilization. His friend Dr John Harris described the structure of the orchid flower and the method of fertilization, and suggested the method of obtaining hybrids; swift to take advantage of the information Dominy crossed *Calanthe masuca* with *C. furcuta* and the result was *Calanthe* Dominii, which flowered in 1856.

— From *The Orchid Review* of February 1956.

The dignity of orchids demands dignity of nomenclature.

— From *The Orchid Review* of February 1956.

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Townsville has intriguing orchids

Photo acknowledgments to Mr Ray Robinson, Mr Bill Golding and Dr Peter (Bill) Lavarack.

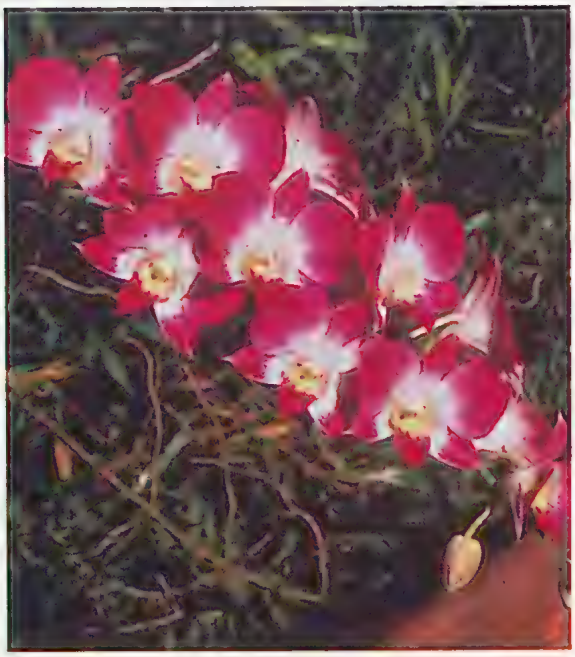
Townsville growers are blessed with a climate which enables them to grow tropical orchids extremely well given diligent culture. Because there is a very long tradition of orchid growing in the area it is possible to find species and hybrids of great interest in every established collection. Four of them are shown here and all have fascinating stories. One is shown in its picturesque habitat.



▲

Hyalosema fritillariiflorum. From the collection of Mr Ray Robinson, president of the Townsville Orchid Society. The huge dorsal of this beautiful and unusual orchid bends forward over the other segments. Most flowers of this genus are large.

H. fritillariiflorum is found in Indonesian New Guinea. It was named by the Dutch botanist J. J. Smith as *Bulbophyllum fritillariiflorum.* Rudolf Schlechter created the section Hyalosema within *Bulbophyllum* to accommodate the dozen or so curled-over-dorsal species. R. A. Rolfe, Kew botanist and founder of the English *Orchid Review,* created *Hyalosema* as a separate genus in 1919. The species is rare in collections.



▲

Dendrobium Impact x *D.* Painted Doll. Registration has been applied for as *D.* Jane Golding. The cross was made by Bill Golding and is quite a study in breeding. One parent, the famed *D.* Impact, provided shape and contributed to colour. Impact itself came from two shapely parents, *D. phalaenopsis* and *D.* Fiftieth State. The latter is from *D.* New Guinea x *D. phalaenopsis.* New Guinea is the primary hybrid from two section Latouria species, *D. macrophyllum* and *D. atroviolaceum.*

The parents of *D.* Painted Doll are *D.* Judy Leroy and *D.* phalaenopsis, and Judy Leroy is *D. canaliculatum* and *D. dicuphum.*

Thus three different dendrobium sections in the plant. The influence of the section Eleuteroglossum species *D. canaliculatum* is apparent in its compact habit of growth.

It is a vigorous grower and flowers more than once a year.



▲ *Dendrobium discolor* growing in a sylvan setting at Cape Richards. This species is common near North Queensland's seashores, even down to the high-water mark. Habitat extends from near Rockhampton along the coast to Torres Strait and Papua New Guinea, and reaching to the eastern slopes of the ranges.

Most of this coastal strip has been cleared for farmland but it is still easy to find in the wild. It is, of course, a protected plant.

It has marked varietal and formal types, the most beautiful being the yellow variety *broomfieldii*. Flowers may last as long as ten to twelve weeks during August to December.



Vanda whiteana. This is the extremely rare lutino form. Fundamentally it is an albino or "pure colour", and its place in the collection of Mr Ray Robinson is a matter of pure luck.

Some years ago Mr Robinson picked up a small dead branch in the bush because it had four small seedlings which obviously were going to die. One of them was this plant. The colour is an even more intense yellow than this illustration conveys. It has been selfed.

▶



Wild native

Dendrobium canaliculatum grows under seemingly harsh conditions and generally in stands of the host tree *Melaleuca vividiflora*. The North Queensland coastal habitat is subject to heavy seasonal rain from late December to early April, which is also the hot summer season. It flowers as the rain ends and the flowers last a long time.

The pseudobulbs are usually round like onions, hence "Onion Orchid", but may be longish in some plants.

This is an unusually large specimen which demonstrates the effect of light on growth. Note the ascending increase in bulb sizes. The old bulbs developed when the tree was alive and the shade from leaves meant that less light reached the plant. Here the tree has died, and the scrub has been partly cleared either by fire or men. The orchid has received much more light which has stimulated metabolism so that the newest pseudobulbs have increased markedly in size. Thus the plant is able to support a magnificent showing of flowers.

In this way nature ensures greater seed production in what could be the last flowering year for a plant.

The article in this issue by Mr Ted Boon on *Native orchids in the Townsville region* describes some of the habitats of this species.

It has been extensively used in hybridising with rewarding results. When crossed with large plants it tends to reduce the size of progeny and assist colour.

Photo by Dr P. Lavarack.

Hybrid native

Winner Ira Butler Prize

The Ira Butler Prize for *Australian Native Orchid Hybrid of the Year* was awarded to this splendid clone of *Dendrobium* Hilda Poxon, bred and shown by Mr Wal Upton.

Details of the Ira Butler Awards are in this issue.

D. Hilda Poxon is a primary hybrid from *D. tetragonum* and *D. speciosum*, first made by the late Ira Butler. Ira was a pioneer in developing native hybrids. The cross has been made several times since then by other growers, including Wal Upton.

D. tetragonum has compacted the vegetative growth and influenced colour. Also it has made stems squarish.

D. speciosum has influenced flower size, texture and floriferousness.

Some clones of this cross flower twice a year. It grows in a Mediterranean-type climate, using any good draining compost.

Photo by W. Upton.



Fine plant wins Ira Butler Trophy

A beautiful flowering of *Dendrobium* Hilda Poxon raised and cultivated by Mr Wal Upton was named Native Orchid Hybrid of the Year by the Ira Butler Trophy committee.

Mr Upton made the cross using a *D. tetragonum* from the Taree area and a large-flowered *D. speciosum* from the Central Mangrove area. Central Mangrove is part of the Hawkesbury sandstone country where the type forms of *D. speciosum* var. *speciosum* are found.

Ten entries were received. A record. Each entry had been judged 'Champion Native Orchid Hybrid' during a winter or spring show of an orchid society or ANOS group.

Some entries did not conform to the rules of the competition in that they failed to submit three slides showing different aspects of the plant and flowers. This made them ineligible for the main prize.

The committee was very impressed with the standard of entries. Each will receive a distinctive Ira Butler Award plaque. Recipients are:

J. F. & B. M. Smith of the Tasmanian OS for a fine *D.* Bardo Rose. H. Goldsack, Native OS of SA, for *D.* x *gracillimum*. L. & R. Moore of South Australia OS for a *D.* Bardo Rose. A. Van Bysterveld of Wollongong Native OS for *D. superbiens* 'Pauline'. Mr and Mrs Rankins of SAOC for a *D.* Hilda Poxon. Mr W. Upton for his OS of NSW winner *D.* Peach Glow, and his *D.* Hilda Poxon at the ANOS Show. A. & B. Peck for a fine *D.* Ellen, winner at OS of NSW Spring Show. F. & I. Chapman of ANOS, Central Coast, for an interesting new cross D. (Ellen x *tetragonum*) x *falcorostrum*. V. Trotman of the VOC for *D.* Specio-Kingianum.

Information on the Ira Butler trophies can be obtained from the secretary: Mr B. Butler, 140 Targo Road, Girraween, NSW 2145. Entries with the necessary three photos should be made to the secretary.

Catalogues received

Valley Orchids 1983. This beautifully-illustrated catalogue will titillate the aesthetic senses of every cymbidium fan. The simplicity of its layout and clarity of its printing make for extremely easy reading. The photography throughout is excellent enabling the features of each flower to be properly appraised.

You can shop from this catalogue with confidence. Obtain your copy from Valley Orchids, PO Box 220, Morphett Vale, South Australia, Australia 5162.

Sunshine Orchid Nursery. Autumn 1983. A very comprehensive listing of mostly warm-growing orchids in flasks, seedlings and mericlones, including many advanced plants. A wide range of growing and growing house aids is listed. Send for catalogue to Sunshine Orchid Nursery, 2034 Roghan Road, Bald Hills, Queensland 4036.

BOOK REVIEW

African Orchids — A personal view

Since the 10th World Orchid Conference there has been a considerable interest in the growing of African orchids. Many growers still tend to regard Africa as having few worthy horticultural orchids but the recent publication of some fine books is tending to make us more aware of them. Some of these are now in society libraries. *The Proceedings of the 10th World Orchid Conference, Orchids of Africa* by Stewart and Hennessy, *Southern African Epiphytic Orchids* by John Ball, should be freely available. All are extremely well illustrated and show plants well worthy of a place in any growing house.

African Orchids — A personal view by Mollie Pottinger conveys its own unique atmosphere. Unique because, as the name implies, it is the personal account by a grower of her experiences in growing them. And under English conditions.

Thus it is worth your study. Mollie Pottinger has adapted them to a new environment just as you need to do in order to grow them. She has acquired this knowledge by a study of their environment, guesswork, trial and error, observation and experiment.

The book though modest in size and price is full of facts which could be of crucial help in growing the species described.

Thirty-two genera are mentioned in alphabetical order and the author describes her experiences in growing from one to several species in each genus.

It is of interest to note that of the genera described only three have representatives in the Australian bush, namely *Bulbophyllum*, *Eulophia* and *Liparis*. This means that if you are looking for species to grow which are not commonly found on Australian show benches then this book is a good place to start looking.

The book has an excellent index; a reading list of available books on African orchids; and forewords by Dr Phillip Cribb and Joyce Stewart, MSc, FLS. Highly recommended for society libraries or personal use.

Price English £4.95 post paid by surface mail. Available from the publisher H. G. Hees, 99 Kiln Ride, Wokingham, Berks. RG11 3 PD, England.

Orchid species in Victoria

The March 1983 issue of the Journal of the Orchid Species Society of Victoria is extremely well produced. This was No. 1 issue of volume 2. The helpful nature of the production makes it a matter for regret that it is only published every two months. But perhaps it is wise of the society committee to hasten slowly.

The journal opens with a very practical review of the meteorological conditions of the Melbourne area and the effect of this environment on orchids.

There are excellent descriptions of the species exhibited at the two previous meetings.

There is a fine review of the genus *Masdevallia*, written by Les Smith.

Two species, *Coelogne cristata* and *Stanhopea tigrina* are dealt with in detail to the extent that no Melbourne grower reading the articles would have any difficulty in growing and flowering them.

Membership of the society is growing rapidly. The *Journal* indicates it is certainly a good society to be in.

News from other species societies would be welcome.

Amateur's look at soft-cane *Dendrobium* breeding

HARRY SPENCE

From a paper presented at the 7th Australian Orchid Conference.

Amateurs who are not obsessed by the thought of gain can render distinct service by experimenting in directions not open to those who have to consider commercial returns. The field left open to them is a large one, and the more angles from which approach is made, the greater the chance of progress. Trade houses on the other hand are restricted more or less to what the public requires, so exploring in uncharted fields could prove a hazardous business. In the breeding of soft-cane dendrobiums it should never be overlooked that the resulting hybrid from a cross made today, will come into rivalry not with varieties of today but with varieties of some years hence — which is a very different thing. Often crosses have been made with a view to results which, by the time of flowering, have been anticipated and surpassed. Thus each hybridiser is left in a measure to work out his own salvation.

This article is in three sections. The first deals with that period covering the species in their native habitats to their arrival in England, and the utter joy of the orchid lovers there at the arrival of each new shipment of plants from the East. However, after what may be termed the first hundred years, English interest in soft-cane dendrobiums seems to have waned considerably for today very little is stirring in this section.

The second part to cover the efforts of Australian breeders — work done by a group of keen fanciers in Sydney, started in the late 1950's and on through the 1960's — a dendrobium breeding field which is still being nurtured along today by Graham Ralston, a man who, though now well into his eighties, is as keen and astute as he was years ago. His work with soft-canes can be compared in some small way, in Australia, with that great effort of Sir Jeremiah Colman in England. Modern crosses have been produced by S. J. Waldie, the immediate past-president of the Orchid Society of New South Wales, and in breeding programmes carried on by the numerous orchid nurseries, particularly in the eastern states.

The final phase to cover the exciting crosses produced by the Japanese hybridisers earlier in this century — famous breeders such as Shimadzu, Ijyuin, Yamaoka, Gotoh, Sohma and others and then on to the great dendrobium empire which Jiro Yamamoto has created over the last decade in Japan and which has overflowed to Europe, the USA and Australia.

In the beginning were the species, living quite happily in their native habitats, mainly distributed through India, Burma, along the slopes of the Himalayas, and some even as far east as Japan, growing chiefly on trees in the forest jungles at various elevations. Eventually, of course, the plant traders and their collectors found them. It was an age of exploration, with explorers going to the far corners of the world to send back treasures in all families of plants, and the bounty of new orchids was a never-ending procession of treasures. Thus it was no time before many of these dendrobium species found their way to English breeders such as Veitch, Wynn, Lawrence, Thwaites, Colman and others. Although there were many hundreds of different dendrobium species sent back to England, including many varieties of some of them, a perusal through Sander's List of Orchid Hybrids shows that only six or seven different soft-cane species were used in hybridising to any great extent.

Dendrobium nobile has by far outnumbered the others, but then it had the greatest number of varieties in the first place; and when an early cross such as *D.* Ainsworthii (*D. nobile* x *D. aureum*) was made and proved so successful, it was immediately copied by the many other breeders of that time. *D. aureum* came next followed by *D. findlayanum*, *D. regium*, *D. wardianum* and perhaps to this list could also be added *D. signatum* and *D. hildebrandii*. Thus from these seven dendrobium species have been bred most of the vast number of hybrids we have in existence in all parts of the world, including Japan today.

D. nobile can be traced back through the family tree of most soft-canes. Its powerful genes dictate in numerous cases that the predominating colour of the progeny produced be in the mauve, purple, deep red and similar shades and that the dark nobile eye remains. It does not necessarily control form, substance, or other attributes of the new flower, but the tendency for the offspring of *D. nobile* to throw back continuously to the one parent has lent much strength for this section of the dendrobium tribe to be known simply as "nobile"-type dendrobes, when really *D. nobile* is but one of the several species used.

D. aureum (syn. *heterocarpum*) has proved to be just as powerful as *D. nobile* in the breeding programmes in which it has been used. Practically all our yellows have come from this species. When crossed with *D. nobile* it has produced *D.* Ainsworthii and when crossed with *D.* Wiganiae, *D.* Chessingtonense has resulted.

From *D.* Ainsworthii has come *D.* Thwaitesiae and from *D.* Chessingtonense has come *D.* Zeno. As time has passed these two lines have merged and become one; thus *D.* Butterfly, *D.* Montrose, *D.* Ceylon Glory etc have resulted, always producing more and more shades of yellow, old gold, apricot, and even to the beautiful art shades of some of the *D.* Adele Fortescue, *D.* Highlight and so on. But the *D. nobile* influence has always been powerful enough to make it almost impossible to produce a truly pure yellow; a yellow with no mauve, pink, or purple around the tips of the segments, or a yellow which will flower pure colour under all conditions — hot or cold; in sun or in shade. *D. aureum* however continues to influence the reddish-brown or maroon eye.

D. findlayanum is one of the brightest gems in the dendrobium species world. It appears to have recessive genes which every so often produce an offspring which has had the dark 'eye' obliterated, to be replaced by a glorious splash of orange or gold. *D.* Sunburst 'Tain' is an example, being the result of a Sander's crossing of *D.* Merlin and *D.* Thwaitesiae. *D.* Merlin goes back in a direct line through *D.* Queen of Gatton, through *D.* Cybele to *D. findlayanum.* However, another clone of this same cross, variety 'Elizabeth' is the usual nobile purple with the dark eye.

D. regium has proved itself to be a most useful and floriferous species. To see this distinct and beautiful parent, or some of the hybrids raised therefrom, is to realise the potential value to the hybridiser. One serious difficulty which arose in earlier days was that *D. regium* itself had a flowering season which proved to be rather later than that of typical "nobiles". Hence it was some time before it could be appropriately mated. Having overcome this obstacle however, a new field of most beautiful late varieties was added, which has extended the flowering season from late winter through to Christmas.

Colman used *D. regium* as a parent in many of his crossings. A most attractive colour, being a pink to rosy red with a white base, the lip cream with a magenta throat and this clear lip has been passed on to many of its progeny — *D.* Royal Sovereign, *D.* Prince Arthur, *D.* Lady Violet being but a few. These days *D. regium* hybrids are mainly used as focal points in displays, as they are usually absolutely smothered with colour.

D. wardianum, D. signatum, D. hildebrandii. These three were used considerably in earlier days and have sired offspring which undoubtedly have brought us a long way along the road to better soft-canes. *D.* Felicity (*D. wardianum* x *D.* Melanodiscus) has given us the *D.* Felicity Fortescue line, a cross which has shown the world that an Australian breeder can produce as good as the best.

D. signatum when crossed with *D. nobile* resulted in *D.* Wiganiae, which in turn gave us *D.* Thwaitesiae and thus on to the long line of fine yellows of which *D.* Montrose and *D.* Fiona have proved to be two such valuable stud plants.

D. hildebrandii crossed with *D. nobile* gave us *D.* Wiganianum which Colman used extensively to produce many of the gems he raised at Gatton Park. Thus *D. wardianum, D. signatum* and *D. hildebrandii,* though names which will probably convey little to the present generation may yet recall known parents of hybrids of great charm.

Of all the new hybrids produced in that first fifty years after the species were brought to England, the greatest was undoubtedly *D.* Lady Colman. Registered by Sir Jeremiah Colman in 1909 from a mating of *D. findlayanum* and *D.* The Gem, its influence reached far into the future. The vast amount of work done by Colman in the breeding of soft-cane dendrobiums will never be forgotten wherever this section of the genus is loved and grown.

After Colman there followed quite a number of breeders in England:— Stuart Low, Horridge, Sander, Schroder, Strauss, Smithers, Charlesworth and many more, all adding their contribution and endeavouring from their breeding programmes to produce the perfect flower. The one man who made perhaps a deeper impact was Peter Smithers — now Sir Peter Smithers and living in Switzerland. In 1959 he registered *D.* Valadeva (*D.* Lady Colman x Merlin) a cross which was later to become the rock on which Japanese tetraploids arose to give us those beautiful orange and yellow labellums.

Looking back on what those early hybridisers achieved from the species then on hand, and considering their lack of knowledge of dendrobium cultural requirements, and their utter ignorance of flasking techniques, as practised by our breeders today, it is quite evident that without their dedication we would at present be still where they were one hundred years ago.

In Australia during the first half of this century there was very little if any breeding of soft-cane dendrobiums. They were seen at shows, but were in most cases those which had been imported from the orchid houses of England. Plants such as *D.* Model, Milady, Thwaitesiae, Montrose, etc, and quite a variety from the Gatton Park Estate of Sir Jeremiah Colman.

During the 1960's a group of well-known orchid growers in Sydney met occasionally to discuss and promote their interest in fine soft-canes, to plan hybridising, swap pollen, import plants and so on. They all had collections of high-class soft-canes, as they did of other genera. However, within a period of less than a decade the group had ceased to exist as such. Four of their number,

Doug Lanceley, Ira Butler, Doug Adamson and Leo Giles had all been called to the great glasshouse above, where no doubt more scientific discussion was carried on under more aseptic conditions.

Of the group, Graham Ralston was left to carry on the breeding programme which he has been pursuing during those previous years. In 1961-62 after an overseas tour and visits to numerous orchid establishments, he brought back with him a few plants of *D.* Montrose x Fiona and *D.* Ceylon Glory x Fiona. These were blended into his breeding to produce larger and clearer yellows.

D. Winifred Fortescue was mated with *D.* Montrose x Fiona to produce *D.* Adele Fortescue and selected clones from this cross produced some fine yellows and golds of good form and size. Two of the best of them, varieties 'Marion' and 'Pearl', one a glorious old gold and the other a fine apricot have both proved to be very superior parents. Following this success, Ralston again used *D.* Winifred Fortescue, crossing it with *D.* Felicity (*D. wardianum* x *D.* Melanodiscus) to produce *D.* Felicity Fortescue.

The bulk of the seedlings of this cross have flowered with colours ranging from off-white to faintest blush pink to a deeper mid-pink. In most cases the labellums have been white to cream, tipped amethyst or magenta, illuminated with golden yellow. Thus, once again, the *D. findlayanum* influence has shown that its recessive genes can lie idle until stimulated by some genetic force to produce flowers of such grace and beauty as this *D.* Felicity Fortescue line. From this breeder have also come crosses such as *D.* Hinamarie (*D.* Anne Marie x *D.* Hinazura), *D.* My Noble Lady (*D.* Milady x *D.* Fort Noble) and the cross Adele Fortescue x Golden Crescent named after a very dear lady, known, loved and sadly missed throughout the Australian Orchid World, the late Maude Tyler. I have mentioned but a few of a long line of crosses which Graham Ralston has created, resulting in finer flowers and brighter colours.

Mr S. J. Waldie, the immediate past-president of the NSW Orchid Society is another breeder of soft-cane dendrobiums who in the last year or so has registered a number of interesting hybrids. Crosses he has made in many cases contain on one side a modern Japanese soft-cane and on the other, one of the well-known English stud plants. Crosses such as *D.* Gwenda (*D.* Orion x *D.* Mary Caine), *D.* Phyllis Mary (*D.* Charm Star x *D.* Leeds), *D.* Susanne Jane (*D.* Angel Flower x *D.* Sunburst), *D.* Elsie Beatrice (*D.* Glorious Rainbow x *D.* York), *D.* Coral (*D.* Glorious Rainbow x *D.* Leeds) and others. The progeny of these matings should prove to be clones of great potential, for nearly all have at least one parent which can be traced back to the species *D. findlayanum.*

Amidst all these amateur breeders and the many paths they are treading to reach their goals, the great efforts of the various orchid nurseries throughout this country to produce the most modern dendrobiums must not be overlooked.

In the early 1970's Russell Martin in Victoria became agent for the Yamamoto Dendrobium Farm in Japan and almost immediately quite a number of named propagations and a greater number of seedlings became available from this breeder in Okayama City. Thus began the Japanese conquest of soft-cane growers in this country.

Improvement in dendrobium breeding in Japan began earlier in this century with the production by Shimadzu of a number of new crosses, mostly made with parents already mentioned.

About this time also commencement was made of the breeding of miniature dendrobiums using Japanese species such as *D. moniliforme,* but the miniature field is one in which I do not wish to become involved in this paper. Shimadzu bred amongst others *D.* Felicity which was later used by Ralston in Sydney with such good results. After him came Ijyuin who produced from *D.* Thwaitesiae, *D.* Melpomene the beautiful yellow Ijyuin, a plant of great floriferousness. Yamaoka, another breeder of high-class soft-canes at that time crossed *D.* Gatton Beau to *D.* Wiganiae to give us *D.* Mont Blanc, a glorious white with a golden yellow eye and from *D.* Regina x *D.* Ikeda he produced *D.* Permer. Tai gave us *D.* Kongoh, a rich red-purple with a creamy white lip. Gotoh gave us *D.* Sakuragari, a pale pink and white which is still being used in breeding in this country today and also *D.* Sagimusume, a pure overall white from which many of the choice Japanese whites have originated.

About this time also Viscount Sohma who was a keen dendrobium grower, and who had been attached to the Japanese Embassy in England, returned to Japan taking with him many top quality stud plants. He remade the *D.* Valadeva cross which Smithers had registered and from it obtained tetraploid type (*D.* Valadeva 'Sohma'). This clone when crossed with *D.* Permer again produced tetraploid type and so *D.* Permos 4N became the rock on which Jiro Yamamoto has built his vast dendrobium empire.

It may be appropriate at this point to draw your attention to the two parents of *D.* Valadeva, the tetraploid, which has produced these golden yellow lips. They are of course, *D.* Lady Colman and *D.* Merlin. *D.* Lady Colman is directly descended from the species *D. findlayanum* being *D. findlayanum* x *D.* The Gem. *D.* Merlin, as was mentioned earlier in this paper discussing *D.* Sunburst 'Tain', goes back in but a few generations also to *D. findlayanum,* the species

with the recessive genes. *D.* Valadeva x *D.* Permer produced *D.* Permos 4N but note that one of the parents of *D.* Permer was *D.* Regina, another offspring of *D.* Lady Colman. Thus *D.* Permos has *D. findlayanum* on both sides of the family tree.

When Jiro Yamamoto arrived on the dendrobium breeding scene in the 1950's a foundation for good soft-canes had already been laid by the English hybridisers. Stud plants were by then available in Japan in many varieties. Yamamoto's first duty was purely a matter of selection — selection of desirable form, attractive colours and required ploidy. He says when he started and I quote. "In order to produce fine flowers at a high rate I realised that I couldn't go by perception only, but it was necessary to have scientific reasons for hybridising. And I thought I needed to know everything concerning orchids". (unquote).

He sought tetraploid types whenever he could as a basis for his breeding, for he knew that cymbidium growers had already recognised that the knowledge of ploidy was an essential qualification for the production of high-class blooms. He also discovered that tetraploids were stronger in good points than in bad and that in comparison with other types they were healthy and fast growers, resistant to insects and diseases and were generally larger in size. However, against that, the majority of them were later in blooming and some were difficult to flower.

With the tetraploid *D.* Permos to guide him through those early days, he has never deviated from his goal — mass production of award-type soft-canes, and he is now able to pursue his ambition with stud stock, third and fourth-generation plants bred from his original selections.

The following is a small list of a few Yamamoto crosses showing *D.* Permos as one of the parents. A second list shows how this progeny is being used to breed second and third-generation soft-canes with a considerable number of *D.* Permos genes still in their make-up.

LIST 1

D. Permos x Anne Marie = *D.* Marimos.
D. Permos x Konan = *D.* Akatuki.
D. Permos x Permissko = *D.* Charm Star.
D. Permos x Valademos = *D.* Glorious Rainbow.
D. Permos x Sakuragari = *D.* Saotome.
D. Permos x Regal Sohma = *D.* Angel Flower.
D. Permos x Permer = *D.* Perning.
D. Permos x Ainsmerlin = *D.* Morning Hill.
D. Permos x Lady Colman = *D.* Geory.
D. Permos x Gatton Monarch = *D.* Red Charm.
D. Permos x Mary Caine = *D.* Glonmery.

LIST 2

D. Glorious Rainbow x Permissko = *D.* Red Fairy.
D. Glorious Rainbow x Orion = *D.* Utopia.
D. Glorious Rainbow x Akatuki = *D.* Malones.
D. Akatuki x Perning = *D.* Peace.
D. Akatuki x Ailing = *D.* Gion.
D. Red Star x Anglow = *D.* White Pony.
D. Red Star = *D.* Christmas Chime.
D. Ailing x Charm Blossom = *D.* Melody of Spring.
D. Utopia x Red Fairy = *D.* Esperanto.
D. Utopia x Malones = *D.* Super Star.
D. Utopia x Christmas Chime = *D.* Romeo.
D. Angel Flower x Geory = *D.* Cinderella.

In the white field it will be noted that many of Yamamoto's hybrids originated in the first generation from Colman's plants such as *D.* Alpha, Gatton Belle, Gatton Beau, etc, being *D. regium* hybrids, and from the species *D. nobile* 'Virginale'. For future generations of this colour he has been able to breed from plants raised in Japan and in particular from *D.* Sagimusume (*D.* Kaga x Agnus) which has proved to be an outstanding white parent. *D.* Yukidaruma 'King', of which *D.* Sagimusume is one grandparent, is undoubtedly the most consistent winner from all the whites which have so far come.

The yellows originated in Japan much as did the whites; from plants bred by the English hybridists many years before. Plants such as *D.* Ainsworthii, Thwaitesiae, Montrose and Fiona. From these earlier stalwarts Yamamoto has built up a vast number of top-quality yellow-stud plants from which to carry on his own programme, lifting the quality of his yellow field higher than had previously been attained.

The following dendrobiums in which *D.* Golden Blossom is featured as one parent, are but a few registered during this period. *D.* Coronation Gold, Papiyon, Oriental Beauty, Gold Star, Golden Butterfly, Yellow Ribbon, Orange Queen, Canary Bird, Golden Chandelier. However, the varietal name of the clone used is not shown. In former times when crosses were named, Sander's Lists often included the varietal name of the parents used, in brackets thus:— *D. nobile* (Harefield Hall), *D.* Plumtonense (Model), *D.* Melanodiscus (Rainbow), *D.* The Gem (Artemis), etc. No doubt modern pressures of work have let a very good practice fall by the wayside, which is a great pity, for knowledge of the variety used, when many clones are raised from the one crossing, would make it so much easier to identify the good or bad points reproduced by a certain parent.

In conclusion, may I quote Jiro Yamamoto just once more. "Dendrobium breeding is not a showy, or a good money-making job. But I thought, if I can produce new types of flowers and widen their beauty every year, it would make a contribution".

Lahey's Road, North Tamborine 4272

AUSTRALIAN ORCHID FOUNDATION

Support for *Paphiopedilum* project urgent

Directors of the Australian Orchid Foundation regard the Flinders University research on clonal propagation of paphiopedilums as the most important project yet backed by the Foundation.

The sum of $13,000 will be required to finance this work over the eighteen months from July 1, 1983 to the end of 1984. The Foundation has allocated $2,000 towards this and appeals to orchid societies and commercial firms to contribute the balance.

Success in this work will establish Australia as a leader in orchid research. It will give Australian nurseries a dominant share of an important world market. It will enable hobby-growers to buy top quality paphiopedilum hybrids and species at reasonable prices.

The Foundation has asked that specific fund-raising efforts be made by societies for this project. Donations from individuals will be gratefully received.

All donations are tax deductible and may be directed to: The Australian Orchid Foundation, C/- 9 Osborne Court, Hawthorn, Victoria 3122; or C/- 87 Thurton Street, Sunnybank, Queensland 4109; or C/- 12 Eddystone Road, Bexley, NSW 2207.

For more information on this project see the March 1983 *AOR*. Progress of the research will be reported in this journal.

Schlechter book launching

The Australian Orchid Foundation publication of an English translation of Schlechter's *The Orchidaceae of German New Guinea* was marked by a book launching gathering at the Royal Botanic Gardens, Sydney, on March 1, 1983.

About forty members of the Foundation and guests were present. The Melbourne contingent included Gerald McCraith, Bill Paddock and Dr Hil Katz. Dr Katz was responsible for virtually all the translation and the checking of Dr Roger's notes. Jim Simmons, who was responsible for resurrecting the Schlechter notes of Dr Rogers which started this project, journeyed from South Australia for the occasion.

The chairman of the Royal Botanic Garden Trust, Professor M. Pitman welcomed those present.

Dr L. A. S. Johnson, director of the Gardens launched the book with a brief description of its background and details of its author.

Gerald McCraith then presented a leather-bound copy of the book to its editor-in-chief, Don Blaxell, assistant director of the Gardens, who carried out this arduous work in his own time. Another leather-bound copy was presented to Dr Katz without whom a worthy translation would not have been possible. One was also given to Jim Simmons who started it all and spent many hours bringing Dr Rogers' notes into order.

The gathering spent a pleasant hour discussing orchids and the aid the work would be to hybridisers, growers and researchers. Australian hybridisers have already established a reputation for handling Papua New Guinea orchids. The late Eunice Kirkwood of Cairns was early in the field and many of her crosses are well distributed. Kevin McFarlane and the D'Bush nursery are currently doing excellent work. In Sydney Phil Spence has made many trips to PNG over the last twenty years and collected many plants. He has flasked hundreds of species and hybrids and many good forms from these are now in private collections.

Several nurseries, particularly in Queensland, are now getting involved with PNG orchids. Madge Purnell, a long-time resident of Lae and now living in Mackay, is one hybridiser worth watching. Her specialty is the Ceratobium section of *Dendrobium*.

It is not only the hybridiser and botanist who will benefit from this book. The hobby grower will need it to evaluate the plants nurseries are providing. There is a great horticultural future for Papua New Guinea species and the hybrids derived from them. To take part in this future you will need this book. Certainly every society library will need a copy.

Schlechter volume acknowledgements. Reference was made, in the March issue, in a review of *The Orchidaceae of German New Guinea* to one person apparently being overlooked in the acknowledgements.

In a letter to *AOR* Mr Don Blaxell, editor of this English version, stressed that, to his knowledge, nearly 100 per cent of the translation was carried out by Dr Hil Katz. Mr Blaxell points out that while deeply appreciating the work of all those who supported and assisted the project from the start the editorial panel had decided to mention only those who had been involved in such a way, that without their assistance the project would not have been completed in its present format.

Schlechter's orchid numbers. Reference was made in the review of the *Orchids of German New Guinea* published in the March issue to the numbers on each figure in Schlechter's

Atlas. These were not collection numbers as stated and had no useful relationship to the text. The editorial committee for the Australian Orchid Foundation English translation therefore deleted them.

Praise for Schlechter Work

Dr B. D. Morley, director of the Botanic Gardens of Adelaide, in a letter to Mr J. T. Simmons praises highly *The Orchidaceae of German New Guinea.* He says ". . . the work is absolutely magnificent and a great tribute to the vision of the Australian Orchid Foundation.

"Everyone involved in the production of this work deserves congratulations. I have no doubt that it will materially assist the process of our understanding of orchids in this part of the world, and indeed of promoting further work. I am particularly impressed with the printing which I find very legible, also the high-quality binding which is refreshing in this day and age. Please convey our thanks to all those responsible, and not least the Australian Orchid Foundation."

UNIQUE DISTRIBUTION BY SEED BANK

A substantial distribution of *Disa uniflora* seed has been made by the Foundation Seed Bank. The seed came from plants successfully raised and grown in Australia by Mr Gerald McCraith.

Disa has always been a difficult genus to grow but after visiting South Africa Mr McCraith has developed a technique suitable to Australian conditions.

Disa uniflora has long been regarded as the most beautiful of all terrestrial orchids.

The initial limited supply was released at a cost of $2.50 per sample, with a limit of two.

It is hoped to publish full details of Mr McCraith's cultural methods in the September issue of *AOR.* It is important to use fresh seed. If you wish to participate in the next distribution of seed then register with the Seed Bank curator now: Mr G. Banks, 183 Windsor Road, Northmead, NSW, Australia 2152.

HUGE GIFT BY VICTORIAN ANOS

The Victorian Group of the Australasian Native Orchid Society has established a remarkable record for the huge sums it has raised for charities.

From time to time the society has also contributed substantial sums to the Australian Orchid Foundation. The latest donation is $2,326.66 which was the entire balance in the society's investment account.

Now that the foundation is financing the research on clonal propagation of paphiopedilums there is great need for substantial donations like these. Congratulations to the members of the ANOS Victorian Group.

Victorian Orchid Club

CELEBRATING DIAMOND JUBILEE YEAR

1923-1983

On the night of May 7, 1923 thirteen people met at the home of Mr David Chandler in Tooronga Road, East Malvern, to discuss the forming of an orchid club. A few weeks later the first meeting of the Victorian Orchid Club was held in the Independent Church Hall. Mr Edgar Johnson became the first president and Mr David Chandler the club's honorary secretary.

This is now the Victorian Orchid Club's Diamond Jubilee Year and the club is Australia's oldest organised orchid body.

In sixty years the Victorian Orchid Club has contributed greatly to the cultural life of Melbourne. It has organised outstanding orchid shows, raised large sums for charity, and assisted thousands of people to gain pleasure and a sense of achievement from the growing of orchids.

Today there are just on one hundred and fifty orchid clubs/societies in Australia. Queensland formed the next society a few years after Victoria followed by New South Wales in 1934. In 1960 all the State bodies grouped to form what is now known as the Australian Orchid Council with the object of unifying judging, establishing national awards, promoting entertaining and educational programmes for societies, and initiating national orchid conference.

The Victorian Orchid Club still maintained its activities during the depression but during the war years was forced into suspension when the Japanese threat became eminent.

Meeting started up again in March 1944 and with members returning from the war backed by new members seeking the peace and relaxation of horticulture, the club grew. Members have contributed substantially to the well-being of other growers all over Australia both by interstate visiting and through the Australian Orchid Council. In turn orchid growers visiting Melbourne have always been royally entertained by members of the Victorian Orchid Club.

In sixty years the VOC has established a tradition of service to its members, the community and to the orchid growers of Australia.

To celebrate the Diamond Jubilee the VOC has organised a social evening for Saturday, July 2, to be held at the Cheltenham Golf Club, Park Road, Cheltenham.

All orchid growers will want to join in wishing the president Mr Bob Hodgins and members of the Victorian Orchid Club a happy Diamond Jubilee Year and increasingly-successful years ahead.

Cultivation of *Sarcochilus ceciliae*

DAVID BANKS

From the Parramatta OS News.

Sarcochilus ceciliae is one of the three lithophytic species of the *Sarcochilus* genus found in Australia. Its distribution extends from the Hastings River in NSW (where it is not common) to the Atherton Tableland in North Queensland. It is a fairly common orchid of the NSW/Queensland border region where conditions are favourable.

I grow my plants in a mixture of 40 per cent pine bark and 60 per cent pebbles, 5-10 mm size. The plants are grown in terracotta pots, slotted or unslotted may be used, and either squat or full size. A number of growers use shallow terracotta saucers for this delightful species. I do not like saucers for two main reasons. Firstly, a healthy specimum of *S. ceciliae* develops an extensive root system in my experience. Secondly, in hot weather the potting medium may get hot enough to kill any active root tips, or in severe cases, the whole root.

In nature this species can be encountered on volcanic boulders on the slopes and tops of ridges or on rocks very close to water. In the first case the plants grow where rain is fairly sparse but heavy dews are common and provide sufficient moisture. This is the case in the Numinbah Valley in Queensland, where I studied these plants with a good friend of mine, John Roberts, who lives in the area. In the second case, plants grow right next to creeks and so receive a constant supply of moisture.

In my opinion, *S. ceciliae* is one of the hardiest members of the *Sarcochilus* genus. It is susceptible to scale attack so normal precautions should be taken to prevent it. It does not like charcoal or sandstone in my observations. Charcoal absorbs and builds up salts and roots that contact it tend to burn. Sandstone is a blotter for water; thus root rot can occur as drainage is insufficient. Drainage is one of the most important aspects when cultivation of this species is discussed.

My plants of this orchid are grown on wooden benches 75 cm above the ground, and under 70 per cent Sarlon shadecloth. During winter I water my plants once or twice a week but during the warmer weather I water them every evening. Do not water this species while the sun is on them, as the plants can cook. I can get away with frequent watering because my mix is very open.

From September to March *S. ceciliae* covers itself with little pink, bell-shaped flowers. I was lucky enough to collect a small piece of *S. ceciliae* var. *albus*, the pure white form. John Roberts has collected three different clones of the alba, which are very rare indeed.

Given a little love and care, this species will multiply into nice clumps. Remember not to cut off the flower spike, as 'aerials' will form. It remains one of my favourite Australian native orchids.

Softcanes in Melbourne

Mr and Mrs Shannon of Cheltenham, Melbourne are noted for the results they obtain with softcane dendrobiums. Writing in the *Ringwood Society Newsletter* they describe their technique which is very similar to that used by Mr Norm Pearson of Grafton, NSW.

Like Mr Pearson (see AOR March 1983 issue) they find use of the clothesline to be a virtue. The plants are hung on the line in summer because they feel that strong direct sunlight promotes flowering. Norm Pearson limits his plants' time on the line due to the intensity of light in the Grafton region.

The Shannons stop watering after the final leaf emerges from the top of the growth to enable the plant to harden up. However the plant is watched and as needed sufficient water is given to stop dehydration and cane withering.

Seedlings are not given the drying-off period but are kept in the glasshouse and watered regularly. Seedlings are repotted at the first cool days in autumn. The potting mix used is 50/50 bark and charcoal plus a small amount of cymbidium mix. Seedlings started in sphagnum moss should have all the moss removed when repotting because the old moss will rot and destroy roots.

Nitrosol and Aquasol are used alternately in fertilizing each week during summer.

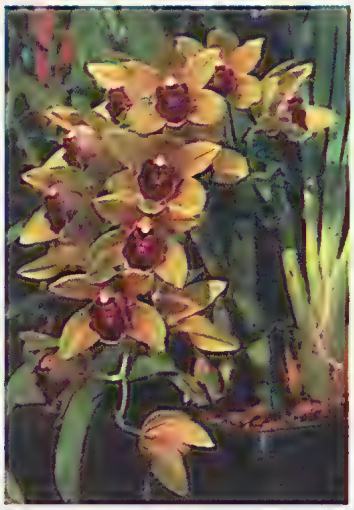
The Shannons point out that this is how they grow softcanes and stress that each grower has to learn what successful growers are doing and then use methods suitable to their own conditions.

Ringwood Orchid Society is one of Melbourne's largest orchid bodies. They publish an informative monthly newsletter. Visitors to Melbourne should not miss seeing their Spring Show. For details and dates see under Show Dates in this issue.

DEVONIANUM DELIGHTS



**Miniatures Delight, AM/RHS*



Bulbarrow Will Stutely, AM/RHS



**Bulbarrow 'Robin Hood'*

Cymbidium devonianum is one of our gem cymbidium species. Its pendulous, multi-flowering habit are passed on to its hybrids.

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CYM. BULBARROW 'WILL STUTELY', AM/RHS
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pendulous, apple-green, deep-red lip.
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**MELBOURNE FLOWERING, OCTOBER 1982.*

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Pine River OS links with Hutt River Province

Mr Bruce Butterworth of the Pine River Orchid Society has supplied details of the society's Autumn Show and also sent the fine photograph above. On the left is "Prince" Leonard of the so-called Hutt River Province, on the right Mr Trevor Porteous. They are holding the Grand Champion Orchid, *Blc.* Norman's Bay 'Lucille', grown by Pam and Trevor Porteous.

Blc. Norman's Bay is a wonderful old cross, having been registered as long ago as 1946 by Stuart Low Orchids. The parents are *Bc.* Hartland and *Lc.* Ishtar.

The Hutt River Province is one of West Australia's best known tourist gimmicks. In a masterly public relations move "Prince" Leonard "seceded" from West Australia over thirteen years ago and created a title for himself. Since then tourists have flocked to the Hutt River "Province" in droves.

One has to admire the prince's sense of humour and his wonderful flare for publicity.

Hutt River Province prints its own "money" and "stamps", which of course are only valuable as souvenirs. The province is also alleged to be a tax-free haven, but any would-be tax-dodger will find it less reliable in this respect than a bottom of the harbour scheme.

It's all good clean fun. No doubt publicity such as this benefits all parties concerned.

The Pine River Orchid Society's Autumn Show was held over the last weekend in March at the Kensington Valley Shopping Centre, Strathpine. The public flocked to the show to see some excellent orchids. Plants and raffle tickets sold well, but best of all several who came to look decided to become members.

Visitors and intending members should contact the secretary, C/- PO Box 239, Strathpine 4500. The society caters for those living in Brisbane's north-western suburbs.

Vale

Gordon Winston Dillon sparked a light that illuminated the whole world of orchidology. As a botanical artist and writer he was superb. As executive secretary-director of the American Orchid Society he displayed marked administrative ability. But what set him apart was his creativity: his ability to initiate great projects and carry them through.

When he became editor of the *AOS Bulletin* membership of the American Orchid Society was only a few thousand. On his retirement it was well over 20,000. He conceived the idea of World orchid conferences and organised the early ones. His work established the International Orchid Commission and the AOS Fund for Education and Research.

Gordon Dillon made two trips to Australia, one before and one during the 6th World Orchid Conference. His help was a considerable factor in the success of this conference.

On retirement he had plans to project his great experience into writing but ill health intervened. This was a loss to the orchid world. Nevertheless his contributions have been so great as to benefit all those throughout the world who count orchids their interest.

Vale Gordon Dillon. You have marked well your place in orchid history.

SA International Orchid Display

Mr S. A. Monkhouse of Adelaide Orchids undertook the difficult but successful task of creating an international orchid display at South Australia's 1983 Garden Week. He arranged the importation of 100 boxes of orchids from 19 countries in the northern hemisphere, including Holland, UK, Japan, Penang, Taiwan and USA. The South Australian Association of Nurserymen arranged for them to be shown in a large 12-sided structure.

The South Coast Orchid Club of SA organised a special feature for this exhibition, which, considering the out-of-season time of the year was a stupendous effort. It included many plants in bloom, examples of easily-grown genera, and the equipment and composts needed to grow them. The area covered was six metres by four metres. Two to four members were always on hand to answer enquiries.

Included in the display were two cymbidiums, *C.* Minuet and a Peter Pan 'Greensleeves'. Also cattleyas, phalaenopsis, paphiopedilums, a zygopetalum, a miltassia, and a number of Australian natives.

Mr Monkhouse and the South Coast Orchid Society of SA achieved an outstanding result in orchid public relations when the public arrived in thousands to this Garden Week Exhibition. *AOR* thanks Mr John Leeder for reporting it.

The wrong view of science betrays itself in the craving to be right. — Karl Popper

The late William (Bill) Thurston

A tribute by G. Hermon Slade.

News from Salisbury, Zimbabwe, tells of the death of William Thurston, long-time resident of Singapore, known in both places as a great amateur orchid grower and as a generous smiling man. A great loss to the orchid fraternity indeed.

When Papua New Guinea Biological Foundation (PNGBF) was created in 1964, a great friend of mine, the late Stanley Smith, a philanthropic Australian, was one of our founders and trustees. Bill Thurston was one of his devoted employees; he shared Stanley Smith's personal interest in orchids and other plants of horticultural merit and practical use.

Early in PNGBF's history, we imported into PNG certain tropical fruits unknown there and in Australia. Bill Thurston knew our desire to obtain Rambutans, *Nephelium lappaceum*, Pulassans, *Nephelium mutabile* and Durians, *Durio zibethinus*. These fruits are characterised by having seed of very short viability, limited to only a few days. They can withstand no major thermal shock and must be specially packed in a material of appropriate moisture content. In the case of Pulassans the difficulty was exacerbated by the fact that the best seed needed to be obtained from their native source, Borneo. Arrangements were made with the interconnecting airlines and the seeds arrived within their period of viability. These were raised and planted out with great care in a block of land at Aropa Plantation, near Kieta, Bougainville Island, PNG.

Fifteen years later, these fruit trees grew to be fine healthy specimens; they were mainly excellent bearers and there were several distinct varieties in flavour and in ease of eating; some had the highly-desirable quality of being "slipstone" varieties. Selected strains of them have been spread and grown in many parts of PNG, where they grow well and are much appreciated for their wonderful flavour. The Durians have caused much comment due to their intriguing flavour with a unique aroma of custard, onions and septic tanks. They made a slow start with the people of PNG but made up in the end with great enthusiasm by leakage of their reputation of being an uncanny aphrodisiac.

In the last five years the Department of Agriculture in Queensland has sent officers to collect seed of these three fruits, all now said to be growing very well in Australia's tropical north.

As Lychees *(Nephelium litchi)* are becoming a very good and profitable crop, much enjoyed in Eastern Australia right now, Pulassans and Rambutans will surely follow and will find popularity, as they are related to Lychees and are even more delicious and of more substantial size. When *AOR* readers are able to relish the sub-acid muscatel grape taste of these two delicious fruits, say a word of thanks to the diligence, devotion and determination of the late William Thurston who collected seed material and successfully achieved their delivery to us within the few days of viability of these challenging, delectable fruits now growing in tropical Australia.

His passing is regretted far and wide: his enthusiasm and open love for his fellow man, live on.

Box 707, Vila, Vanuatu

Tassie workshop gets new members

The Launceston Orchid Society decided that a workshop could put new interest into the society. The object was to not only bring in new members but to help existing members.

From those who regard assistance as a way of life the society received necessary advice and practical skills to run the workshop and for this they express thanks.

Mr Ron Mansfield described and demonstrated composts. Mr John Woodward spoke on cool growers, showed slides and how to repot. Mr Peter Jackson dealt with natives and de-flasking. Mr Mark Hayes gave a vital discourse on glass-houses and accessories, with plenty of illustrations and pamphlets as handouts. Mr Hinton Lloyd skilfully demonstrated floral art. Special thanks must be given Mrs Peck and her daughter for excellent catering.

Attendance was higher than expected. At the next society meeting eleven new members attended. Old members learnt from the workshop too, and everyone was elated by its success.

Congratulations Launceston. Especially president Ron Clark and his active committee.

MAY DAY AT ROSS

May Day was a red-letter day at Ross, Tasmania. Practically in the centre of Tasmania in fact. Here members of the five Tasmanian orchid societies joined together for a day of fun. These State get-togethers seem destined to become an annual event since Ross is virtually only a couple of hours run from any of the centres concerned.

CURRUMBIN CONSERVATION PROJECT

The Gold Coast Orchid Society has made good progress with work on display facilities for native orchids at the famous Currumbin Bird Park. Members have supplied many fine plants from their own collections and donations of plants have been made by other societies. There is need for even more plants.

The society is prepared to arrange to pick up donated plants or meet the cost of transport. Contact president Mr J. W. Bailes, PO Box 323, Burleigh Heads, Queensland

In building this protected growing area it is estimated that members carted over forty tons of rocks and logs onto the site. Forty native species were bedded among these rocks and on trees.

During the Seventh Australian Orchid Conference two buses brought some registrants to see the project at a time when many of the plants were established and flowering. They were led by Mr Frank Slattery, past-president of the Australian Orchid Council, and current president Mr Chas Hill.

The society has received a letter from the Australian Orchid Foundation stating that members at its annual meeting were most interested to learn of the great progress made in this conservation project. The letter congratulated the society on "a marvellous achievement".

The success to date of this fine project indicates that any donation of native orchids will not be wasted.

11th World Orchid Conference registration

Intending participants should now have indicated their desire to register. Registration fee, if paid before June 30, 1983 is $100. After that date cost will be greater.

If you haven't acted send immediately to: 11 WOC Registration, University of Miami Conference Center, 400 Southeast 2nd Avenue, Miami, Florida 33131 USA.

QOS Autumn Show

Fine specimen plants of *Dendrobium bigibbum* were a feature of the Queensland Orchid Society's Autumn Show. The variety *superbum*, of course, is Queensland's floral emblem, of which all Queenslanders are justly proud.

Vanda South East Beauty, owned by Mr S. Heyden, was Champion of the Show. Its colour was outstanding.

Champion specimen was Mr and Mrs Horsfall's *Cattleya* Portia 'Baroness', a huge plant covered with masses of bluish flowers.

His win with *Blc.* Cadium Light 'Green Elf' made Mr G. Stewart a very proud novice.

Reserve Champion was Mr L. Napper's *Cattleya* Portia 'Cannazaro', a sister clone to the Champion Specimen.

Pine River OS (inspired by Prince Leonard?) won first place in the Societies Displays class. This was also judged the Most Pre-Eminent Entry. Second was West Brisbane OS, the North Albert OS third with West Moreton fourth and Queensland Native OS fifth. All were fine displays. North Brisbane OS had a small and neat display.

An interesting feature was a class for candy-striped hard-canes.

SWAP OFFER OF AOR BACK COPIES

There's a lovely lady up Mt Tamborine way who collects orchid society badges. She also has a number of *AOR* copies going back a great many years. Some to 1939. If you want a particular back copy and have a society badge to exchange then get in touch with Mrs Joyce Spence, Lahey's Road, North Tamborine, Queensland 4272. Husband Harry Spence has a wonderful article on soft-cane dendrobiums in this issue. Joyce grows paphs as well as Harry grows soft-canes.

ANOTHER RECORD FOR FRANK SLATTERY

At the last annual general meeting of the Parramatta OS Mr Frank Slattery acted as returning officer for the thirty-fifth successive year. This has to be a record. Members voted him a special thank-you for his long and treasured association with the society. All officers were returned unopposed. Mr W. (Bill) Whiteford is president and Mr Graeme Banks starts his ninth year as secretary. The committee names read like a who's-who of some of Sydney's leading growers. Parramatta has always produced an excellent newsletter each month, currently under the skilful editorship of Mr K. H. Steele.

Generally speaking conditions which feel comfortable to a human being will be suitable for most orchids; thus dry cold is easier to bear, and more successfully endured by orchids, than damp cold.

— Joyce Stewart in *Orchids of Tropical Africa.*

SHOW DATES, MEETING NIGHTS AND ADDRESSES

ABBREVIATIONS. Details have been shortened where no ambiguity is likely. After meeting day the words "of month" are implied.

DATA. The listing includes all available data at time of going to press. However some societies have not completed arrangements and where possible the address of the last known secretary is given.

NORTH QUEENSLAND

8th Australian Orchid Conference Show
Greek Community Hall
Flinders Street West
Townsville
Setting up Tues 30/8. Judging 8pm. Registrants preview on Wed 31/8 at 10am. Official opening at noon. Show closes on Sun 4/9 at 5pm. **Host society: Townsville OS.**

Atherton Tableland OS. WINTER. At Atherton Agricultural Show in Merriland Hall. Mon 11/7, 8am-10pm. Tues 12/7. SPRING. "Fun in the Sun" Combined Society Show at Table Tennis Centre, Cairns, Sat 8/10, 8am-10pm & Sun 9/10, 8am-5pm. This show by four societies is highly recommended to visitors from south. If staying on after 8th Australian Conference don't miss this one. Sec: Mr J. J. Mackin, PO Box 427, Atherton 4883. Meets 1st Thurs of month except Dec and Jan at CWA Hall, Jack St, Atherton.

Ayr and Dis OS. Sec: Mrs E. J. Dwyer, PO Box 412, Ayr 4807.

Blackwater & Dis OS. Sec: Mrs L. Weaver, 11 Bottletree St, Blackwater 4728.

Bowen OS. Sec: Mrs P. Tracy, PO Box 726, Bowen 4805.

Bundaberg OS. Sec: Mr A. Bennett, PO Box 1173, Bundaberg 4670.

Capricorn Orchid & Foliage Club. ANNUAL SHOW. Lawrence Motors Showroom, North Rockhampton. Fri 7/10, noon-9.30pm, Sat 8/10, 8.30am-9.30pm. Presentations 7.30pm Sat. Sec: Mr P. Jacobs, PO Box 697, Rockhampton 4700. Ph AH (072) 28 2820. Meets 2nd Fri except Jan at Orange Grove Hall, Alexandra St, North Rockhampton.

Clermont O & GS. PO Box, Clermont 4721.

Emerald O & F Society. SPRING. Sapphire Room, Leichhardt Hotel, Hermont St, Emerald. Sat 17/9, 9.30am-4.30pm. Sec: Mrs V. Coombes, 32 Esmond St, Emerald 4720. Ph 82 1084. Meets 2nd Thurs except June, July, Aug when meetings 1.30pm Sat. Venue St Luke's Parish Centre, Riley St, Emerald. 1984 Autumn Show, Easter Sat, Emerald Star Plaza, Clermont St, 9-11.30pm as part of Sunflower Festival.

Gladstone OS. Sec: Mrs N. Merritt, PO Box 867, Gladstone 4680. Meets 1st Wed 7.30pm, Gladstone Bowls Club Hall, Ferris St.

Innisfail OS. Sec: A. Matthews, PO Box 475, Innisfail 4860.

Mackay OS. SPRING. Centrepoint, Mackay. Thurs 22/9, 8am-9pm. Fri 23/9, 8am-5pm. Sat 24/9, 8am-noon. Wide range of genera. Sec: Mrs E. Baldock, PO Box 776, Mackay 4740. Ph 42 2282. Pres: Mrs M. Purnell, ph 42 1546. Meets 3rd Thurs at Christian Bros College Rec Hall.

North Queensland OS. Sec: A. S. Smith, PO Box 1024, Cairns 4870. Ph 55 1246. Meets 2nd Mon, Education Centre, Morehead St, Bungalow. No details advised. See under Atherton "Fun in Sun" Show.

Mt Isa OS. No show. Meets last Fri at 8pm, Playgroup Centre, Daphne St, Mt Isa. Sec: Mrs L. Sanderson, PO Box 702, Mt Isa 4825.

Proserpine OS. Show details from Mrs D. Lucas, PO Box 55, Proserpine 4800.

Rockhampton OS. SPRING. St Paul's Cathedral Hall, William St, 2, 4, 5/9. Fine vandaceous and cattleyas. T. Dean, 201 Grimley St, North Rockhampton. Ph 28 2278. Meets 4th Tues, North Rockhampton Uniting Church Hall, Musgrave St.

South Burnett OS. Sec: L. G. Hunt, 8 Farr St, Kingaroy 4610.

Townsville Orchid & Allied Plants Ass. PLANT DISPLAY. Nathan Plaza. October dates to be confirmed. Sec: Mr L. Lyon, PO Box 663, Hermit Park 4812. Ph 79 3051. Meets 3rd Tues, OES Hall, Ingham Rd, Townsville.

Tully & Dis OS. Sec: Mrs E. Gourley, PO Box 648, Tully 4854.

QUEENSLAND
BRISBANE AND VICINITY

Queensland OS. Meets 2nd Mon Metropolitan Senior Citizens' Centre, McLachlan St, Valley. GPO Box 2002, Brisbane 4001. Ph 378 7649.

Aspley OS. SPRING. Community Centre Hall, Edinburgh Castle Rd, Wavell Heights. Sat 24/9 9am-6pm. Sun 9am-4pm. Meets 1st Thurs as above. Sec: Mrs J. Hall, PO Box 67, Aspley 4034. Ph 266 7438.

Brisbane OS. Sec: I. H. McCallum, PO Box 94, Stones Corner 4120.

Caboolture OS. Sec: Mrs V. Rapkins, PO Box 549, Caboolture 4510.

Craigslea OS. Sec: M. Grainies, C/-33 Ferricks St, Stafford 4053.

Darling Downs O Ass. SPRING. Eager's Showroom, Toowoomba, Sat 17/9 to 24/9 in Carnival of Flowers week. Sec: Mrs S. Stone, PO Box 3216, Toowoomba 4350. Meets 3rd Thurs, Scout Hall, Ruthven St.

Eastern Districts OS. SPRING. Guardian Angels Hall, Bay Tce, Wynnum. Sat, Sun, 10/9, 11/9. Mrs S. Crosby, PO Box 60, Wynnum Central 4178. Meets 4th Thurs, Guardians Hall.

Glasshouse Country OS. SPRING. School of Arts, Beerwah. Fri 23/9 9am-8pm. Sat 9am-2pm. Set up Thurs 22/9. Sec: Mrs N. Frizzo, PO Box 21, Beerwah 4519. Ph (071) 96 9361. Meets 2nd Thurs, CWS Hall, Beerwah.

Gold Coast OS. SPRING. In Owen Park Showground as part of Gold Coast Show. Always a nice display. Sec: Mr W. Murphy, PO Box 323, Burleigh Heads, Qld 4220. Meets SCWD Hall, Burleigh Heads on 2nd Sun in month at 1.30pm.

Gympie & Dis OS. Sec: Mrs A. Maher, PO Box, Gympie 4570.

Ipswich OS. SPRING. RSL Clubrooms, Down St, North Ipswich. Fri 16/9 & Sat both 9am-8pm Sun 18/9 10am-5pm. Sec: Mr J. Voogt, PO Box 272, Ipswich. Ph (072) 82 3331. Meets 1st Wed, Humanities Building, Ipswich.

John Oxley OS. ANNUAL SHOW. Mt Coot-tha Botanic Gardens Auditorium. Sat 30/7 9am-9pm. Sun 31/7 9am-5pm. Sec: Mr H. Faber, PO Box 205, Corinda 4075. Ph 379 3626. Meets 2nd Wed, Uniting Church Hall, Oxley Rd, Sherwood. Above is Brisbane's only late winter show.

Maryborough OS. SPRING. St Paul's Memorial Hall, Adelaide St. Fri 16/9 8am-9pm. Sat 8am-5pm. High standard show. Sec: Mrs D. Gatfield, PO Box 236, Maryborough. Ph (107) 21 4363. Meets 2nd Tues, TPI Hall, Sussex St.

Maroochydore OS. LATE WINTER. PJ Dance Studio, 11 Duforth St, Maroochydore. 18/8 to 20/8. 9am-7pm each day. Sec: Mrs Z. Rogers. Ph (071) 43 2045. Meets 1st Tues, Lutheran Hall, Henkley Pde, Maroochydore.

Mt Coot-tha Day OS. No public shows. Sec: Mrs D. Den Haan, PO Box 32, Paddington 4964. Meets 1st Tues at 10 am in Mt Coot-tha Gardens Auditorium.

Native OS of Queensland. Sec: Mrs J. Crane, PO Box 159, Broadway 4000. Ph 378 2881. Meets 1st Mon, Bread House, 49 Gregory Tce, Brisbane, 8pm.

North Albert OS. SPRING. Orchid Spectacular, Oldmac Toyota Showroom, 3376 Pacific Hwy, Springwood. Sat 27/8, 9am-6pm. Sun 28/8, 9am-5pm. Open show, competitors from all societies welcome. Sec: Mrs Val Heyden, ph (07) 349 9610. Meets 3rd Tues at Woodridge State High School, Wembley Rd, Woodridge.

North Brisbane OS. SPRING. Toombul Shopping Town, Thurs to Sat 1, 2, 3/9 in shop hours. Meets St Peters C of E Hall, Toombul Rd, Northgate, 4th Thurs at 8pm. Also 2nd Tues, Culture meeting 9.30am for shift-workers. For confirmation of meetings contact Sec

Mrs V. Scales, PO Box 325, Nundah 4012.

North Coast OS, Nambour. SPRING. Civic Hall, Nambour, Thurs 8/9 to Sat 10/9. Meetings 4th Mon, Band Hall, Daniel St, Nambour at 8pm. Sec: Mrs L. Paroz, PO Box 140, Nambour 4560. Ph (071) 45 9348.

Orchid Species Society. SPRING. New Botanic Gardens Auditorium, Mt Coot-tha. Sat 15/10 8am-5pm. Sun 9am-4pm. Sec: Mrs P. Smith, PO Box 485, Toowong 4066. Ph 369 1328 or 371 9241. Meets 3rd Mon, Mt Coot-tha Gardens Auditorium.

Pine River OS. SPRING. Kensington Village Shopping Centre, Strathpine. Dates not to hand. Society and commercial displays plus sales stall. Sec: M/s D. Marques, PO Box 229, Strathpine 4500.

Redcliffe OS. SPRING. Kipparing Village Plaza. Thurs 8/9 to Sat 10/9, 9am-5.30pm each day. Sec: Mrs Joyce Smith, PO Box 51, Margate Beach 4019. Ph 269 4728. Meets 2nd Wed at Clontarf CWA Hall, cnr Georgina and Victoria Aves.

Redlands OS. This society holds an Autumn Show each May. No data to hand on Winter or Spring Shows. Sec: Mrs D. Skiggs, PO Box 116, Cleveland 4163.

Sunshine Coast OS. SPRING. Caloundra. For details contact Miss A. Hall, PO Box 279, Caloundra 4551.

Toowoomba OS. SPRING. Myer Roof Top during Carnival of Flowers, Sat 17 to Sat, Sept 24. Shop hours except Sun, 10am-5pm. A wonderful week to visit. Sec: Mrs B. Simpson, PO Box 885, Toowoomba, Qld 4350. Ph 35 1948. Meets 4th Fri except Sept and Dec, St James Hall, Russell St.

Warwick OS. Sec: N. D. Cook, 39 Myall Ave, Warwick 4370.

West Brisbane OS. Sec: Mrs M. Keogh, 56 Bellata St, The Gap 4061.

West Moreton O Group. SPRING. St Paul's War Memorial Hall. Thurs 22/9 & Fri, both 9am-9pm. Sat 24/9, 9am-noon. Sec: Mr T. Freiberg, PO Box 101, Ipswich 4305. Ph (pres) (07) 288 8761. Meets W. G. Hayden Humanities Building, cnr Nicholas and South Sts, Ipswich.

Wynnum Manly Dis OS. SPRING. RSL Hall, 184 Melville Tce, Manly. Sat 1/10, 8.30am-9pm. Sun 2/10, 8.30am-4.30pm. Sec: Mrs E. Biggall, PO Box 91, Manly 4179. Ph 396 0128. Meets 3rd Wed above address.

NSW SYDNEY AREA

Orchid Society of NSW. WINTER. Westfield Burwood. Whole week commencing Mon 20/6 in shop hours. Theme: "Exotic Harvest". SPRING. Roselands Shopping Centre, Mon 19/9 to 24/9, shop hours. One of the world's great orchid shows. Marshal: Mr B. Collins, PO Box 131, St Paul's 2031. Ph 398 6448. Meets last Mon at Henley Bowling Club, Crown St, Henley, 8pm. Sec: Miss B. Oldfield, 61 Mountford Ave, Guildford 2161.

Australasian Native OS. SPRING. Combined show of Sydney and Warringah Groups. Mona Vale Mem Hall, Pittwater Rd, Mona Vale. Sat 10/9, 9am to 9pm. Sun, 10am to 4pm. Set up noon to 10pm, Fri 9. The only native orchid show held in Sydney area and largest in Australia. Species and hybrids for sale. Admission 50¢. Children and pensioners free. Show marshal: C. Arnott, ph 98 9173. Show sec: R. Lowe, ph 44 3993. Sydney Group meets 2nd Fri, 8pm at Ryde School of Horticulture, Warringah Group, 2nd Thurs at Thomas Vickers Mem Hall, Pitt and Grainger Sts, Curl Curl. All welcome.

Bankstown OS. WINTER. Scottish Hall, Weigand Ave, Bankstown. Mon 4/7 at 8pm. SPRING. Scottish Hall, Mon 5/9 at 8pm. Meets 1st Mon of month at Scottish Hall, Bankstown. Sec: Mr K. Healey, 78 Alma Rd, Padstow Heights 2211. Ph 77 9370.

Berowra OS. SPRING. Community Centre, Gully St, Berowra. Fri 9/9, noon-9. Sat 10/9, 9-9. Margaret Barnett, 7 Cullenya Close, Berowra 2081. Ph 456 1764. Meets 3rd Thurs, Berowra Community Centre.

Blue Mountains OS. WESTERN REGION SPRING SHOW. From 1/10. Contact secretary. Meets 4th Fri of month, Melrose Hall, Great Western Highway, Emu Plains. Sec: Ralf Terbutt, 33 Joanna St, South Penrith 2750. Ph (047) 36 2230.

Cumberland O Circle. WINTER. Bethlehem Uniting Church, 7 Castle Hill Rd, West Pennant Hills, 10am to 5pm, Sat 23/7. SPRING. Castle Towers Shopping Centre, Old Northern Rd, Castle Hill. Wed 24/8 to Sat 27/8 in shop hours. Sec: Mrs E. Lyttle, 25 Bishop Ave, West Pennant Hills 2120. Ph 84 4611. Meets Bethlehem Uniting Church, 7 Castle Hill Rd, 4th Wed.

Eastern Suburbs OS. WINTER. St Luke's Church Hall, Arden and Varna Sts, Waverley, 8-10pm, 20/6. SPRING. Same place, 8-10pm, 12/9. Meets 3rd Mon, St Luke's. Sec: S. Condon, 7 Langlands Rd, Annangrove 2154. Ph 679 1482.

Eastwood O Circle. SPRING. Masonic Hall, Rowe St, Eastwood. Mon, 26/9, 1.30-10pm, 27, 28/9, 10am-10pm, 29/9, 10am-9.30pm. Sec: Mr L. A. Farnham, PO Box 227, Carlingford 2118. Ph 871 7749. Meets 1st Wed, Uniting Church Hall, Acacia St, Denistone East.

Five Dock RSL OS. WINTER. Five Dock RSL Club Auditorium, 66 Great North Rd, Five Dock. Wed 27/7, 8-10.30pm. Wed 22/7, 8-10.30pm. SPRING. Auditorium Birkenhead Shopping Centre, Thurs 29/9, 2-9pm, 30/9 9.30-6, 1/10 8-5, 2/10 9-5, 3/10 10-4. Set up Wed 28/9 noon-9pm. Mrs Joyce Levi, 3 Prince Edward St, Gladesville 2111. Meets 4th Wed, Five Dock RSL Club.

Hawkesbury District OS. Richmond Neighbourhood Centre, West Market St. Sat 3/9, 11am-6pm. Sun 4/9, 10am-5pm. Meets 2nd Tues, Richmond Neighbourhood Centre, 8pm. Sec: Mr A. Barty, 4 Dellview St, Glenbrook 2773. Ph (047) 39 3209.

Ku-ring-gai OS. SPRING. Westmead Plaza, Hornsby. Thurs 25/8 to Sat 27/8, shop hours. Sec: Mr J. Brydie, 248 Galston Rd, Hornsby Heights 2077. Ph 476 3383. Meets usually 3rd Mon at Pymble Community Hall, 1035 Pacific Highway.

Lidcombe Hospital OS. 19th SPRING FESTIVAL. Upper Recreation Hall, Lidcombe Hospital, Joseph St, Lidcombe. Fri 9/9, noon-9pm. Sat 10/9, 9am-4.30pm. BANKSTOWN SHOPPING SQUARE ORCHID SHOW. "Garden Court". Mon 12/9 to Sat 17/9, shop hours. Sec: Mr T. Murphy, 6 Baroona Place, Seven Hills North 2147. Ph 624 1493. Meets 2nd Wed, Lower Recreation Hall, Lidcombe Hospital.

Manly-Warringah OS. SPRING. Memorial Hall, Pittwater Rd, Mona Vale, 26/8, 1pm-8pm, 27, 28/8, 10am-5pm. Sec: Mr Rod Nelson, 17 Little Willandra Rd, Cromer 2099. Meets 4th Thurs, Community Hall, Oceana St, Narraweena.

North Shore OS. WINTER. Neutral Bay Shopping Village. Wed 13/7 to Sat 16/7. Shop hours. SPRING. Arndale Shopping Centre, Forestway, Wed 14/9 to 17/9 in shopping hours. A fine show. Sec: Mrs L. Bromley, 43 Ferguson St, Forestville. Ph 452 3202. Meets 1st Wed, The Dougherty Hall, Victor St, Chatswood (opp oval and Grace Bros).

Panania-East Hills (RSL) OS. SPRING. Panania Senior Citizens' Centre, Anderson Ave. Sat 24/9, 10.30am-5pm. Sec: Mr A. Ravenscroft, 5 Penrose Ave, East Hills. Ph 774 2287. Meets 1st Tues except Dec and Jan, Panania-East Hills RSL Club, 28 Childs St.

Parramatta OS. WINTER. Wentworthville Community Centre Hall, Darcy Rd, Tues 26/7, 8pm. SPRING. Parramatta Westfield Shoppingtown. Mon to Sat 12-17/9 in shop hours. G. S. Banks, 183 Windsor Rd, Northmead 2152. Ph (02) 639 4815. Meets 4th Tues, Wentworthville Community Centre Hall.

Southern Districts
GREAT COMBINED SHOW
Westfield Shoppingtown, Hurstville
Monday, August 22 to Saturday, August 27. In shopping hours.
Sec: Mr Ron Edwards, 114 Coonong Rd, Gymea Bay 2227. Phone 525 9623.
Combined Societies: St George OS, Bankstown OS, Sydney OS and Cymbidium Club of Australia.

St George OS. WINTER. Uniting Church Hall, Bay St, Rockdale. Tues 5/7, 8pm. Visitors table. SPRING. As above address, 6/9, 7.45pm. All welcome, bring your plants. Sec: Mrs Jean Slattery, 12 Eddystone Rd, Bexley 2207. Ph

50 7985. Meets 1st Tues, Uniting Church Hall, Rockdale.

Sutherland Shire OS. WINTER. Gymea Bowling Club, 699 The Kingsway, Gymea. Sat 9/7, 11am-6pm. Sun 10/7, 9am-5.30pm. 19/6, 10am-7pm, 20/6, 9am-6pm. SPRING. Same place, Sat 1/10, 11am-6pm. Sun 2/10, 9am-6.30pm. Mon 3/10, 9am-6.30pm. Mrs G. Withers, 19 Davey Ave, Jannali 2226. Ph 518 9045. Meets 2nd Mon, Gymea Bowling Club.

Sydney Orchid Society. WINTER. Remembrance Hall, 220 Lakemba St, Lakemba. Thurs 9/6, 8pm. SPRING. Above address, 8/9 8pm. Mrs Betty Clare, 75 Quigg St, Lakemba 2195. Ph 759 6616. Meets 2nd Thurs above address.

Western Suburbs OS. SPRING. Woodstock Community Centre, Church St, Burwood. Tues 13/9, 8pm. Sec: Mr A. Davis, 5 Knocklayde St, Ashfield 2131. Ph 797 7329. Meets 2nd Tues, above address.

NEWCASTLE AND CENTRAL COAST

Newcastle District Combined Societies. WINTER. Garden City, Kotara. Benching 12/7 (Tues) then in shop hours till Sat 16/7. SPRING. Same venue. Benching Tues 27/9, then shop hours to Fri evening 30/9. Sec: Mrs M. Parlour, PO Box 301, Mayfield. Ph (049) 43 7768. Combined Societies Committee meets 1st Mon every 2nd month at Teralba Community Hall.

Newcastle OS. SPRING. St Andrews Hall, Lament St, Newcastle, Wed 7/9, 1-9pm. Thurs & Fri, 9am-9pm. Sat, 10am-8pm. Sec: Mrs M. Parlour, Box 301, PO Mayfield. Ph (049) 43 7768. Meets 3rd Wed, Scouts Hall, Station St, Waratah.

ANOS Central Coast Group. SPRING. Scout Hall, Gertrude Place, Gosford. Sat 3/9, 10am-6pm. Sec: Mrs B. D. Johnston, 158 Geoffrey Rd, Chittaway Point 2259. Ph (043) 88 1785. Meets 2nd Wed, Baptist Church Hall, York and Frederick Sts, East Gosford.

ANOS Newcastle Group. SPRING. Non-competitive display in conjunction with SGAP at College of Advanced Education, Shortland. Sat 24/9 & Sun 25/9. Enquiries to Mrs S. Herd, 4 Pemell St, Toronto 2283. Ph (049) 59 2734. Meets 4th Wed except Dec at John Young Community Centre, Thomas St, Cardiff.

Boolaroo OS. SPRING. Jesmond Centre, Blue Gum Rd, Jesmond. Thurs 22/9 to Sat 24/9. Shop hours. Meets Teralba Community Hall, 1st Wed in month. Sec: Mrs H. Haynes, 116 Main Rd, Speers Point 2284. Ph (049) 58 1148.

Gosford & District OS. WINTER. Mon 4/7 to Sat 9/7. Shop hours in Marketown, Gosford. SPRING. Mon 12/9 to Sat 17/9. Shop hours in Marketown. Always a bright show. Sec: Mr L. Pascoe, PO Box 541, Gosford 2250. Ph (043) 41 5425. Meets 4th Wed, Baptist Church Hall, York and Frederick Sts.

Gloucester & Dis OS. SPRING. Gloucester Bowling Club. Sat 24/9, 9.30am-9.30pm. Sec: Mrs T. Littlewood, 42 Philip St, Gloucester. Ph (065) 58 1950. Meets 2nd Thurs, 15 Queen St, Gloucester.

Hastings River OS. WINTER. Combined show with Manning River OS. For details contact respective secretaries. SPRING. CWA Hall, High St, Wauchope. Fri 2/9, noon-9pm. Sat 3/9, 9am-9pm. Sec: Mrs D. Griffiths, PO Box 193, Wauchope 2446. Ph Sec: (065) 83 5470, pres: 85 3311. Meets 2nd Fri at Uniting Church, Hastings St, Wauchope.

Maitland & Coalfields OS. SPRING. Sharton Motors, High St, Maitland (opp Town Hall). Thurs 15/9 to 18/9, 9am-9pm daily. Sec: Mr E. Hunt, Windermere Rd, Lochinvar 2321. Ph (042) 30 7300. Meets 2nd Thurs except Jan, Literary Institute, Banks St, East Maitland.

Manning River OS. WINTER. Combined show with Hastings River OS, for details contact respective secretaries. SPRING. Taree High School Hall, Macquarie St. Thurs 8/9, 9am-9.30pm. Fri 9/9, 9am-6pm. Sec: Mr Bob Zeller, PO Box 797, Taree 2430. Meets 1st Fri at Protestant Hall, Macquarie St, Taree.

Morisset OS. WINTER. Lakeside Plaza, The Entrance. Thurs 28/7 to Sat 30/7. Shop hours. Set up 27/7, 5.30-7.30pm. SPRING. Charlestown Square Shopping Centre, benching 24/8, Wed 24/8 to Sat 27/8. Sec: Mr B. Jacob, Lot 8 Warnervale Rd, Warnervale. Ph (043) 92 2702. Meets Charmhaven Community Hall, 2nd Tues.

Tamworth OS. SPRING. Myers Store, 369 Peel St. Fri 23/9, 11am-5pm. Sat 24/9, 9am-11.30am. M/s M. Drewe, 13 Cohen St, Tamworth 2340. Ph (067) 66 3316. Meets 3rd Wed, Centre for Continuing Education, 81 Brisbane St.

NSW NORTH COAST

Alstonville OS. SPRING. Catholic Hall, Main St, Alstonville, Sat 3/9, 8.30am-5pm. Sec: Mr C. G. Howie, PO Box 51, Alstonville 2477. Meets 2nd Wed, Anglican Church Hall.

Ballina OS. SPRING. Ballina Shopping Centre, Fri 9/9, Sat 10/9. Sec: Mr D. Lynch, 6 Rainbow Ave, Ballina. Ph (066) 86 3027. Meets 1st Sat afternoon, Community Health Centre, Cherry St at 2pm.

Byron Dis OS. 27th SPRING. Uniting Church Hall, Dalley St, Mullumbimby. Fri 16/9 and Sat 17/9. Sec: Mrs E. King, PO Box 258, Mullumbimby 2482. Phone enquiries to Mr P. Sheaffe, 85 1387. Meetings rotate UC Hall, Mullumbimby; CWA Hall, Byron Bay; RSL Hall, Bangalow, 2nd Mon night of month.

Casino OS. SPRING. RSL Hall, Canterbury St. Fri 23/9, 11.30am-9pm. 24/9, 8am-5pm. Sec: Dr J. E. Binnie, PO Box 98, Kyogle 2474. Ph (066) 32 1719. Meets 4th Fri, Old Bowling Club House, Convent Pde.

Coffs Harbour OS. Waltons Orchid Show. Waltons Store, High St, Coffs Harbour. Thurs 11/8 and Fri 12/8, both 9am-5pm. Sat 13/8, 9-11am. SPRING. Supper Room, Civic Centre, Gordon St. Fri, Sat 16-17/9, 9am-9pm. Sun 18/9, 9am-3pm. Open show, set up Thurs night. Fine, well-displayed orchids. Mr S. Clemesha, Lot 6 Skinner Place, Avocado Heights, Woolgoolga 2456. Ph 53 6151 (pres). Meets 1st Thurs, Cavanbah Hall, High St.

Evans Head OS. SPRING. Memorial Hall, Pacific Hwy, Woodburn. Sat 17/9, 8am-4pm. Sun 18/9, 7.30am-4pm. Sec: Mrs B. Rose, 16 Cedar St, Evans Head 2473. Ph (066) 82 4707.

Grafton OS. SPRING. No details. N. Skennar, PO Box 351, Grafton 2460. Ph (066) 42 3813. Meets 3rd Wed except Sept and Jan in St Marks Hall, Fry St.

Hastings River OS. SPRING. No details. Mrs M. Graham, PO Box 193, Wauchope 2446. Ph (065) 83 1552. Meets 2nd Fri, Hastings St, Uniting Church Hall.

City of Lismore OS. SPRING. Lismore City Hall Cedar Room. Mon 12/9 to Thurs 15/9. First 3 days 9am-9pm. Last day 9am-6pm. Features superb cymbidiums and softcane dendrobiums. Also stages fine Autumn Show each May. Sec: Mr J. Harrey, 3 Crown Lane, South Lismore 2480. Ph (066) 21 6489. Meets 3rd Tues, Red Cross Rooms, Keen St, Lismore. Septemberfest Celebrations take place around this Show time making it an excellent month to visit.

Tweed District OS. SPRING. In conjunction with Tweed Banana Festival, date not confirmed. Meets 3rd Thurs, CWA Rooms. Sec: Mr D. Capner, Kiel Vale via Murwillumbah 2484. Ph 72 1375.

NSW SOUTH COAST AND WEST DISTRICT

Campbelltown OS. WINTER. McArthur Square. Thurs 21/7 to Sat 23/7. High class. SPRING. Same venue 22/9 to 24/9. Splendid natives. Sec: Mr E. Fish, 10 Yarrangobilly St, Heckenberg 2168. Ph 608 1672. Meets 2nd Tues, Beverly Park School.

Corrimal OS. WINTER. Warilla Grove Shopping Centre. Wed 13/7 to Sat 16/7. Shop hours. SPRING. Warilla Grove Shopping Centre. Wed 2/9 to Sat 10/9. Shop hours. Sec: Mrs M. Ransley, 6 Coolgardie St, Corrimal 2516. Ph (042) 84 2332. Meets 2nd Wed, Masonic Hall, Railway St, Corrimal.

Griffith OS. SPRING. Wade High School Hall. Sat 1/10, Sun 2/10, both 10am-5pm. Sec: Mrs V. Beattie, PO Box 1944, Griffith 2680. Ph (069) 62 5371. Meets 1st Mon, St Albans Hall, Griffith.

Illawarra OS. WINTER. Warrawong Shopping Centre. Thurs 14/7 to Sat 16/7 in shop hours. Good early orchids. SPRING. Same venue. Thurs 1/9 to Sat 3 9. Shop hours. Best show on the coast. Sec: Mr T. Bradford, 9 Edgeworth Ave, Kanahooka 2530. Ph (042) 61 2260.

Shoalhaven OS. WINTER. St

Andrew's Presbyterian Church Hall, Kinghorn St, Nowra. Thurs 21/7, 9am-6.30pm. SPRING. Above address 16/9, 9.30am-9pm, 17/9, 9.30-9pm. Sec: Mr S. Crowther, 4 Amber Place, Bomaderry 2541. Worthy show. Meets 1st Mon, St Andrew's Pres Hall.

South Coast OS. WINTER. Westfield Shoppingtown, Figtree. Thurs 21/7 to Sat 23/7. Shop hours. SPRING. Same venue. Thurs 15/9 to 17/9. Shop hours. Sec: Mrs Y. Williams, 39 Outlook Drive, Figtree 2525. Ph. (042) 28 4947. Meets 1st Mon, Uniting Church Hall, Russell St, Corrimal.

Southern Riviera OS. SPRING. Civic Centre, Ulladulla. Sat 1/10, 10am-6pm. Sun 2/10, 10-4. Mrs M. Carter, PO Box 124, Milton 2538. Ph (144) 55 2196. Meets 1st Fri, Kendall Cottage, Ulladulla.

Wollongong & Dis Native OS. SPRING. No details. Sec: Mrs E. Beileiter, 19 London St, Berkeley 2506. Meets 2nd Tues in Meeting Room, Wollongong Town Hall.

VICTORIA

Victorian Orchid Club. WINTER. Keysborough/Parkmore Shopping Centre. Mon 11/7 to Sat 16/7. Shop hours. SPRING. **Diamond Jubilee Show.** St John's Church Hall, Toorak. Fri 9/9 and Sat 10/9, both 10am-9pm. Sun 11/9, 1-5pm. Sec: Mrs I. J. Hutchins, 37 Elliot St, Mordialloc 3195. Ph 580 4917. Meets 3rd Mon, St John's Church Hall, Toorak.

ANOS Victorian Group. SPRING. National Herbarium, 1 and 2/10, 10am-6pm each day. Sec: Mr Clive Lloyd, 17 Leonard Close, South Clayton 3168. Ph 551 4923. Meets 1st Fri, National Herbarium.

Ararat OS. SPRING. Ararat Arts Activity Centre. Fri 7/10, 10am-8pm. Sat 8/10, 10am-6pm. Sun 9/10, 10am-5pm. Sec: Mr R. Selwood, Picnic Rd, Ararat 3377. Ph (053) 52 1845. Meets 2nd Fri, Church of Christ Hall.

Geelong Orchid & Indoor Plant Club. SPRING. Centenary Hall, Cox Rd, Norlane. Sat 24/9, 2pm-9pm and Sun 25/9, 10am-6pm. Sec: Mr L. J. Dale, 88 Albert St, Geelong West 3218. Ph (052) 9 7906. Meets 1st Thurs except Jan, TPI Hall, 163 Myers St, Geelong.

Gippsland OS. SPRING. St Andrews Church Hall, Kay St, Traralgon. Fri 7/10, 10am-9pm. Sat 8/10, 10am-5pm. Sec: H. J. Jacobs, PO Box 110, Stratford 3862. Ph (051) 45 6371. Meets 2nd Mon, Continuing Education Centre, Sale.

Goulburn Valley OS. Venue and date not advised. Meets 1st Thurs. For details contact N. Nichelson, "Woorals", Arcadia 3613. Ph (058) 23 1485. Interesting monthly meetings.

Maroondah OS. WINTER. Vermont High School. Fri 15/7, 8pm. SPRING. Same venue. Sat 1/10 and Sun 2/10. Set up Fri 30/9. An outstanding show. Sec: Mrs S. Campbell, 59 Anthony Drive, Chirnside Park 3116. Meets 3rd Fri, Vermont High School Theatre, Morack Rd, Vermont.

Maribyrnong OS. ANNUAL SHOW. No details. Sec: Ms L. Scott, 7 Rainbird Court, Keilor Downs 3038. Ph 366 9060 for show and meeting night details.

Melbourne Eastern OS. WINTER. Normal meeting venue and time, 27/6. SPRING. Chadstone Shopping Centre Auditorium, Wed 21/9 to Sun 25/9. Last day 10am-4pm, others 9am-9pm. Sec: Mr R. F. Lyster, 3 Martin Rd, Glen Iris 3146. Meets last Mon except for 2nd Mon in Dec at St John's Church Hall, Burke Rd, Camberwell Junction.

Midlands OS. SPRING. Library Hall, Castlemaine. Thurs 27/10, noon-9.30pm. Fri 28/10, 9am-9.30pm. Sat 29/10, 9am-4pm. Competitive show in larger hall due to huge success of 1982 show. Sec: G. Sobers, Midland Hwy, Castlemaine 3450. Ph (054) 72 3167. Meets 2nd Tues, 8pm at RSL Hall, Castlemaine.

Mornington Peninsula OS. WINTER. Karingal High School, Ashleigh Ave, Frankston. Fri 24/6, 8pm in conjunction with monthly meeting. Members of other societies invited. SPRING. Karingal High School. Sat 8/10, 9am-8pm. Sun 9/10, 11am-5pm. Set up 7/10 from 9am. Sec: Mr L. G. Smith, 13 Glamis Ave, Hampton 3188. Ph (03) 598 6476. Meets 4th Fri, Karingal High School.

Ringwood OS. ORCHIDS FOR THE EIGHTIES. Myer Eastland Shopping Centre. Set up Tues 27/9. Open Wed 28/9 to Sat 1/10. Shop hours. A very big show with big prize-money. Sec: Mrs V. O'Keeffe, PO Box 17, East Ringwood 3135. Ph 725 4693. Meets 1st Tues, Maroondah High School Community Centre, Maroondah Hwy, East Ringwood.

Maroondah OS. WINTER. Vermont High School, Morack Rd, Vermont. Fri 15/7 at 8pm. SPRING. Venue as above. Sat 1/10, 10am-6pm. Sun, 10am-4.30pm. Sec: Mrs S. Campbell, 59 Anthony Drive, Chirnside Park 3116. Ph 726 7157. Meets 3rd Fri at Vermont High School.

Melbourne Eastern OS. WINTER. St Johns Hall, Camberwell 27/6. SPRING. "World of Orchids 1983", Chadstone Shopping Centre, Dandenong Rd, probably Wed-Sat 14-17/9, 10am-10pm. Sun 19/9, 10am-4pm. Meets last Mon, St John's Hall, 8pm. Sec: A. F. Wilson, 1 Arthur St, Murrumbeena 3163. Ph 569 7689.

Orchid Species Society of Victoria. SPRING. Nunawading Hort Centre, 83 Jolimont Rd, Forest Hill. Sat 24/9 and Sun 25/9, both 10am-6pm. Sec: Mrs J. Lander, Lot 58 South Ave, Mount Evelyn 3798. Ph 736 3298. Meets 1st Thurs at Nunawading Hort Centre.

Sunraysia Orchid Club. SPRING. St Margaret's Hall, Deakin Ave, Mildura. Fri 16/9, 1-9pm. Sat, 10am-6pm. Sun 18/9, 10am-5pm. Sec: Mrs J. Ashworth, 44 Hazeldene St, Mildura 3500. Ph (050) 23 3339. Meets 2nd Tues, St Andrew's Hall, Deakin Ave.

Warringal OS. WINTER. Heidelberg Masonic Temple, Lower Heidelberg Rd (near Burgundy St), Heidelberg. Wed 20/7 at 8pm. SPRING. Heidelberg Technical School, cnr Bell St and Waterdale Rd, Heidelberg. Sat 8/10, 10am-9pm. 9/10, 10-5. Mrs M. Murray, 60 McArthur Rd, East Ivanhoe 3079. Ph 49 3408. Meets 3rd Wed, Masonic Temple, Heidelberg.

SOUTH AUSTRALIA

Orchid Club of SA. WINTER. St Peters Town Hall, Glen Osmond. Sat 10/7, noon-6pm. 11/7, 11am-4.30pm. Trading table and tea and biscuits. SPRING FESTIVAL. John Martin's Auditorium, North Tce, Adelaide. 18/9 to 25/9. Proceeds to St John Ambulance. Hon Sec: Mr D. J. Harris, 36 East Ave, Black Forest 5035. Ph 297 7525. Meets 1st Thurs, Australian Mineral Foundation.

Gawler Dis O Club. WINTER. Masonic Hall, Lyndock Rd, Gawler. Thurs 14/7, 8pm. SPRING. Motor Showroom, Main St, Gawler. Sat 1/10, 10.30am-5.30pm and Sun 2/10, noon-5.30pm. Sec: J. L. Hebberman, PO Box 87, Freeling 5372. Ph (085) 25 3101. Meets 2nd Thurs, Masonic Hall.

Mount Gambier OS. SPRING. ES Land Home Centre, Sturt St. Mon 26/9 to Sat 1/10 in shop hours. Sec: Miss M. E. Franklin, 4 Wehl St South, Mt Gambier 5290. Ph (087) 25 2901. Meets 4th Mon except Dec and Jan in St Martin's Church Hall, Edward St, Mt Gambier.

Native Orchid Society of SA. SPRING. Goodwood Orphanage Education Centre, 181 Goodwood Rd, Millswood. Sat 17/9, noon-8pm. Sun 18/9, 1-5pm. Sec: Mr E. Hargreaves, 1 Halmon Ave, Everard Park 5035. Ph 293 2471. Meets 4th Tues except Dec at St Matthew's Hall, 57 Bridge St, Kensington. Also shows in conjunction with SGAP in Walter Duncan Hall, Showgrounds, Wayville. Sat 24/9, 10am-6pm. Sun 25/9, 1-5pm.

Northern and Eastern Districts OS. WINTER. St Phillip's Parish Hall, Galway Ave, Broadview. Fri 22/7, 10am-9pm and Sat 23/7, 10am-9pm. SPRING. Same venue. Thurs 1/9 to Sat 3/9, each day 10am-9pm. ORCHID DISPLAY. Gillies Plains Shopping Centre, North East Rd, Gillies Plains. Thurs 29/9 to Sat 1/10 in shop hours. Sec: Mr J. Keen, 22 Campbell St, Oaklands Park. Ph (08) 296 4476. Meets St Philip's Hall, 3rd Thurs, 8pm.

Port Augusta O Club. SPRING. Held in conjunction with Port Augusta Garden Club, Cooindo Hall, Commercial Rd, Port Augusta. Dates not advised. Sec: M. Jones, 10 McLeay St, Port Augusta 5700. Meets 4th Wed, Dept of Community Welfare, El Alamein Rd.

Port Lincoln OS. SPRING. CWA Hall, Port Lincoln. Fri 16/9, noon-5pm. Sat 17/9, 9.30am-4.30pm. Sec: Mrs K.

Castley, PO Box 1335, Port Lincoln 5606. Ph (086) 82 3417. Meets last Fri at Eyre Peninsula Community College.

Riverland Orchid Society. Display at Loxton Agricultural & Horticultural Society Show. Sun afternoon and Mon SA Labour Day. Sec: Mr M. Pfeiffer, PO Box 484, Loxton 5333. Ph (085) 84 1439. Meets 2nd Sun, 2pm at Senior Citizens' Club, Loxton.

South Coast Orchid Club of SA. WINTER. "Collanades", Noarlunga Centre, Mon 25/7 to Sat 30/7, shop hours. SPRING. Same place, Mon 3/10 to Sat 8/10. Floral art feature. Plants and blooms on sale. Sec: Mrs S. J. Stirling, 63 Norrie Ave, Clovelly Park 5042. Ph 277 3830. Meets 2nd Tues, Lutheran Church Hall, Windsong Court, Christies Downs.

SA Orchidaceous Society. WINTER. Thebarton Assembly Hall, South Rd, Torrensville. Sat 23/7, 1-6pm. Sun 24/7, 10am-5pm. Part proceeds Thebarton Hospital. SPRING. Tea Tree Plaza Shopping Centre, Modbury. Mon 12/9 to Sat 17/9 in shop hours. Part proceeds Adelaide Children's Hospital. Sec: Mrs E. Shawyer, 60 Balfour St, Naiksworth 5063. Ph 44 4260. Meets 3rd Wed, Thebarton Assembly Hall, South Rd, Torrensville.

Whyalla O Club. DISPLAY. Agricultural Society Show, Jubilee Park. 20/8, 10am-10pm. 21/8 do. SPRING. Westlands Mall, Whyalla. Thurs 29/9 to Sat 1/10. Shop hours. Corsages, etc made to order at show. Sec: M/s S. Gault, PO Box 566, Whyalla 5600. Ph 45 4740. Meets 3rd Wed at Left Hand Club, Dick St, Whyalla.

TASMANIA

Tasmanian OS. SPRING. Town Hall, Macquarie St, Hobart. Fri 7/10, 1-9pm. Sat 8/10, 9am-9pm. Sun 9/10, 10am-5pm. Mainlanders should plan their holidays to take in this show. Sec: J. F. Smith, 11 Warren Court, Howrah 7018. Ph (002) 44 1555. Meets 4th Mon, Legacy House, 159 Macquarie St, Hobart.

TASMANIAN STATE ORCHID CONFERENCE SHOW

Devonport OS. SPRING. Spreyton Football Hall, Spreyton. Fri 30/9 and Sat 1/10, 10am-8pm. Sun 2/10. Sec: Mrs G. Smith, PO Box 793, Kindred 7310. Meets 3rd Wed, Don College, Watkinson St, Devonport.

Launceston Orchid Society. SPRING. Windmill Hill Memorial Hall, High St, Launceston. Fri 7/10, 2.30-9pm. Sat 8/10, 10am-9pm. Sun 10am-5pm. Sec: Mrs Reta Stronach, 17 Birdwood St, Launceston 7250. Ph (003) 26 2632. Meets 3rd Tues, Anzac Hostel, Paterson St.

Orchid Society of North-West Tasmania. SPRING. Burnie Civic Centre. Thurs, 13/10. 2-9pm, 14 and 15 both 9am-9pm. Sun 16/10, 10-4. Sec: Mrs E. O'Halloran, Municipal Caravan Park, East Wynyard. Ph (004) 42 3730. Meets 2nd Mon, 7.30pm, Hellyer College, Mooreville Rd, Burnie.

Scottsdale OS. SPRING. Scottsdale. Fri 23/9, 1-9pm. Sat, 10am-9pm. Sun, 10am-5pm. Sec: Mr E. M. Rainbow, Nabowia 7254. Meets 3rd Thurs at Kendell's Hotel.

WESTERN AUSTRALIA

Orchid Society of WA. WINTER. Garden City Shopping Centre, 125 Risley St, Booragoon. July 13 to 16, set-up 12/7. SPRING. Same venue. Wed 21/9 to Sat 24/9, set-up 20/9. Both shows in shopping hours. Sec: Mr J. Foley, 39 Stirk Rd, Alfred Cove 6154. Ph 330 2132. Meets 4th Fri, Institute of Engineers Hall, 712 Murray St, West Perth.

Albany OS. WINTER. Venue to be announced. Dates Thurs 21/7 to Sat 23/7. SPRING. Ditto. Dates Thurs 15/9 to Sat 17/9. Meets at 75 Seymour St, Albany, 4th Wed, 8pm. Sec: Mr B. Newman, PO Box 13, Albany 6330. Phone (098) 41 5670.

Bunbury OS. WINTER. Bunbury Forum, Sandridge Rd. Thurs 28/7 to Sat 30/7. SPRING. Bunbury Forum. Thurs 29/9 to Sat 1/10. Both shows in shop hours. Sec: Mrs D. Hays, 18 Eagle Cres, Eaton 6232. Ph (097) 25 1495. Meets 1st Tues, Walker Memorial Hall, Bunbury.

Melville Dis OS. WINTER. Roy Edinger Hall, Stock Rd, Palmyra. Sat 9/7, 1-8pm. Sun, 9.30am-4.30pm. SPRING. Same venue. Sat 3/9, 1-8pm. Sun 4/9, 9.30am-4.30pm. Mrs C. Sullivan, PO Box 53, Melville 6156. Ph 330 2218. Meets Roy Edinger Hall, 2nd Thurs.

Northern Districts OS. WINTER. Morley City Shopping Centre. Thurs 22/7 to Sat 24/7. SPRING. Karrinyup Shopping Centre. Thurs 16/9 to Sat 18/9. Both shows in shopping hours. Meets 4th Mon, Alf Faulkner Hall, Eden Hill. Sec: Mrs L. Rowe, 4 Ash Way, Morley 6062. Ph 276 8138.

Wanneroo OS. SPRING. Whitford City Shopping Centre, Whitford's Ave, Hillarys. Thurs 15/9 to Sat 17/9. Shop hours. Meets Lesser Hall, Wanneroo Civic Centre, 3rd Thurs, 8pm. Sec: Mr R. Stapleton, 11 Chrysostum St, North Beach 6020. Ph 447 6821.

WA Native Orchid Study & Conservation Group. Meets in Theatrette, Dept of Agriculture, Jarrah Rd, South Perth, 3rd Wed, 8pm. Sec: Mr N. Hoffman, 25 Brine Rd, Kalamunda 6076. Ph 293 3058.

Orchid Society of the NT. GARDEN FAIR. Meets 1st Mon in members' gardens. Sec: Mr A. McGregor, PO Box 38493, Winnellie, NT 5789. Ph 81 8436, AGM 3/5/82.

Nightcliff OS. Sec: Mrs M. Cailler, PO Box 41165, Casuarina, Darwin 5794.

SECRETARIES PLEASE ADVISE 1984 SHOW DATES INCLUDING AUTUMN AS SOON AS POSSIBLE.

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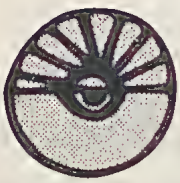
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804	Pot. William Farrell x Blc. Orange Nugget 'Kadaoka', HCC/AOS	$75.00
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842	Lc. Janice Matthews 'Ceylon', HCC/AOS x C. aurantiaca 'Key West', AM/AOS	$55.00
843	Lc. Janice Matthews 'Ceylon', HCC/AOS x Slc. Rajah's Ruby 'Babe's Baby', AM/AOS	$55.00
844	Lc. Janice Matthews 'Ceylon', HCC/AOS x Blc. Orange Nugget, 'Kadaoka', HCC/AOS	$55.00
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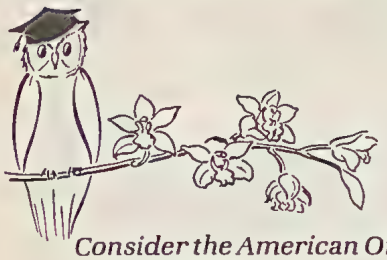
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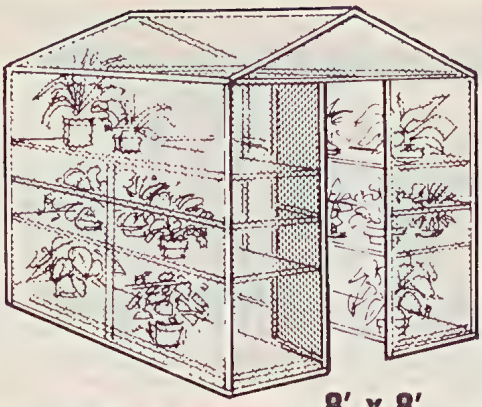
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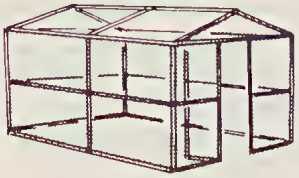
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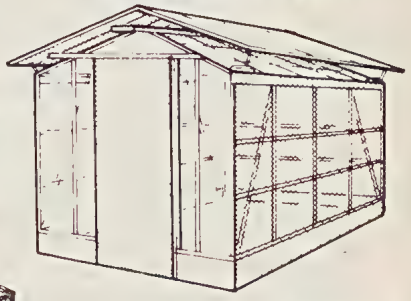


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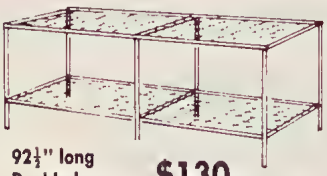
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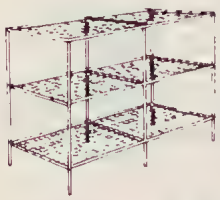
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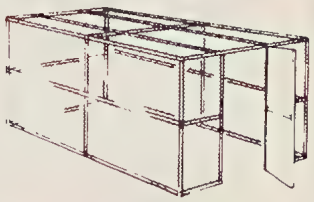
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Vol. 48, No. 3 $4.00
September Quarter 1983
Registered by Australia Post Publication No. NBH 0770

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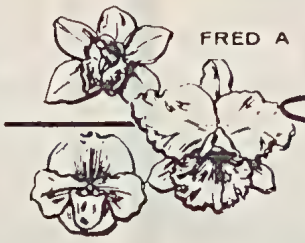
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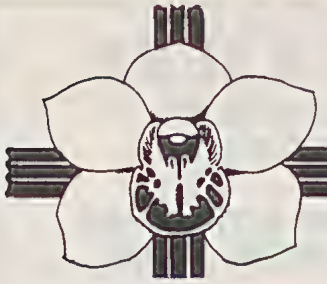
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PETER PAN 'GREENSLEEVES' 4N
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POETIC 'ANDRE'
ROBIN 'FRECKLES'
ROBIN 'LITTLE JOHN'
ROTHESAY 'BLACK LABEL'
ROZEL BAY 'MONT MILAIS'
RUBY EYES 'CLARET VEIL'
SAMARKAND 'ROYAL'
SAN FRANCISCO 'MONA LISA'
SAN FRANCISCO 'THE BEAT'
SAYONARA 'BUTTERCUP'
SENSATION 'KIMBERLEY'
SENSATION 'MELITA'
SHOWGIRL 'JULIE CHRISTIE'
SABRE DANCE 'KENSINGTON'
SARAH JEAN 'AMY'
(SIRIUS x CORAKI) 'ELVINA'
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SLEEPING DREAM 'TETRAGOLD'
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SWAN LAKE 'SNOW CAP'
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SYLVIA MILLER 'SERENDIPITY'
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TABOO 'BLACK IMP'
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TAPESTRY 'BLACK BEAUTY'
TAPESTRY 'ZITA'
TERAMA 'ROBIN' 4N
TERAMA 'YOWIE BAY' 4N
TETHY'S 'LITTLE FIREBALL'
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VALLEY PROMISE 'REYNELLA' 4N
VALLEY SONG 'MAUREEN'
VALLEY SUNSET 'ERNA'
VALYA CRAIG 'SUTHERLAND'
VANGUARD 'CHRISTMAS BEAUTY'
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WARRADALE 'KOSCIUSKO'
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AUSTRALIAN Orchid REVIEW

SEPTEMBER QUARTER
Vol. 48 No. 3

Printed and Published by:
GRAPHIC WORLD
14 McGill Street, Lewisham 2049
560 6166

- **Editorial Associates:**
QUEENSLAND: Mr Frank Oelkers, 419 Robinson Road, Geebung 4034.
VICTORIA: Mrs I. Hutchins, 37 Elliot Street, Mordialloc, Victoria 3195.
SOUTH AUSTRALIA: Mr N. Lenkic, GPO Box 730, Adelaide, SA 5001.
WESTERN AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154.
TASMANIA: Mr C. Nicholas, 7 Kelvin Avenue, Moonah, Tasmania 7009.
INTERNATIONAL: Mr G. H. Slade, Box 797, Vila, Vanuatu.
- **Editor: Ronald Kerr.**
- **Editorial Committee:**
R. KERR, G. HANSEN
A. B. PORTER, R. MILLER
- **Address Editorial to:**
R. KERR, 260 Geoffrey Road Chittaway Point, NSW 2259 Phone: (043) 88 2605
- **Advertising, address to:**
ELIZABETH LOWE, 14 McGill Street, Lewisham, NSW 2049. Phone (02) 560 6166
- **SUBSCRIPTIONS.** 1983. Within Australia $14.00. Overseas surface $16.00 or $US18.50. Airmail rates on request.

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Contact these secretaries:
NSW: Miss B. Oldfield, 61 Mountford Avenue, Guildford 2161.
QUEENSLAND: The Secretary, GPO Box 2002, Brisbane. Phone: 377 3253.
VICTORIA: Mrs I. Hutchins, 37 Elliot Street, Mordialloc, Victoria 3195.
SOUTH AUSTRALIA: Mr D. J. Harris, 36 East Avenue, Black Forest 5035. Phone: 297 7525.
WEST AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154. Phone: 330 2132.
TASMANIA: Mr J. F. Smith, 11 Warren Court, Howrah 7018. Phone: 44 1555.
NORTHERN TERRITORY: Mr A. McGregor, PO Box 38493, Winnellie 5789. Phone: 81 8436.

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To comply with the International Code of Botanical Nomenclature the whole of a species is in *italics* and the second term has no capital. With hybrids only the first term is in *italics*, the second starts with a capital and is not latinised. Generic names, used in a non-botanical sense do not have a capital nor are they in italics. In society bulletins and on place cards italics can be indicated by underlining.

COVER STORY

Cattleya Portia 'The Baroness' earned a well-deserved Certificate of Cultural Commendation for Mr W.N. Horsfall of Brisbane. On page 184 Mr Horsfall describes how he grew it to such perfection.

This blue form of *C.* Portia was originally given the cultivar epithet 'Coerulea' and therefore it is technically correct to refer to it as *C.* Portia 'Coerulea'. It is a primary hybrid from *C. bowringiana* and *C. labiata* and exhibits the best characteristics of both species parents. Most clones in this grex have proved strong growers.

Orchids in Noumea

G. HERMON SLADE

At the Sixth World Orchid Conference held in Sydney in 1969, I met a grower from New Caledonia, subsequently to become a great friend of mine. He is Gabriel Cayrol, Architect, now President of *Societe neo-Caledonienne d'Orchidophilie* — New Caledonian Orchid Society (O.S.N.C.). He led me to becoming a member of that society in terms that are delightfully flattering — especially when said in French — and has resulted in my visiting O.S.N.C. over the two years of such membership.

However, it is the quality of the orchids grown by members of O.S.N.C. and the stamina, health and general excellence they have, that brings me to pen and paper.

O.S.N.C. meetings, like ours, are enlivened and beautified by exhibits brought to meetings by members and in no time when wandering among them, one finds invitations to "come and see my plants".

The compost principally used is blue-metal chips, road-making quality, sieved through about 12 mm mesh and free from fines. How epiphytic orchids, especially dendrobiums, grow in it! Roots soon bind the material in three dimensional reinforcement so that the plastic pots generally used there, are good planting units indeed. Dendrobiums, cattleyas, epidendrums, renantheras and vandas are all grown this way, the above-mentioned genera except vandas, almost exclusively so: vandas take well to open baskets in Noumea as they do here in Vila, sending their roots into open air.

To have a local source of blue-metal as in New Caledonia, and Australia, seems an envious blessing to us here in Vila: we have scarcely any rock except limestone; and while many plants grow well in limestone, including paphiopedilums, most epiphytic orchids flourish better in a totally non-absorbent medium.

Why? — let us ask . . . .
— Probably because orchids therein find a marvellous source of water.
How come?
— Because absolutely non-absorbent surfaces are either *wet* or *dry*: one never sees "damp" glass; though it is easy to have damp bricks or damp limestone; the latter two are absorbent like a sponge.

If we consider a surface of blue-metal, quartz or such non-absorbent material, every dewy night the surface is covered with a *liquid* layer of surface water; orchids are designed this nightly blessing with their velamen covered roots. In New Caledonia as in Papua New Guinea orchids are often seen on bare quartzite rocks, usually turgid with aqueous opulence.

Several times in New Caledonia, I went to examine an inflorescence of a Phalaenanthe type *Dendrobium* hybrid to become embarrassed by the flower breaking off unbelievably easily due to the robust turgidity of the orchid and its inflorescence. Here in Vanuatu where I grow the same types of orchids on treefern stumps or in fibre medium, the inflorescences are much more easier to handle due to the more supple, less healthy stems and leaves due to the less effective harvesting of water.

I am sure that many orchid growers in Australia must have tried blue-metal: if not, try a few plants of floppy soggy rooted orchids in it and watch what happens. Cut all the dead roots away before you do this.

On the show bench was a huge white *Cattleya*, Bow Bells type, growing in a garbage bin of plastic. The medium was largely polystyrene foam chips, a substance totally different from quartzite, but equally water resistant and therefore never "damp"; only *wet* or *dry*. The huge plant was topped with blue-metal chips. This cattleya is the best specimen I have ever seen vegetatively. Not a leafless pseudobulb and innumerable leads with about forty inflorescences. What a sight!

Of course, the orchids so potted are regularly watered with diluted fertilizer. "Osmocote" is much used for this purpose.

How I wish I could acquire about a cubic metre of blue-metal chips! I brought a kilogram or so back with me last visit; the response here in Vila is just the same as in Noumea. In Australia growers can acquire all they want; I envy them. We have the climate and the regular dewy nights; I cannot find a non-absorbent medium of sufficient density to anchor the plants and to have the necessary physical qualities. Cork slabs have the qualities and I find many orchids cover such blocks with roots, especially equitant oncidiums. These do not like treefern blocks or osmunda fibre at all; the roots rot all too easily in the continually damp medium; on cork they dry out by day completely and several days each week they collect dew in the wee hours of the morning when the human world sleeps. Cork blocks are good for some orchids, but the material is too light and difficult to use as a potting medium to anchor sizeable plants; blue-metal chips have the density and the water resistant qualities that seem to suit orchids of many genera well.

Box 797 Vila, Vanuatu

ORCHID TRAVELOGUE

A trip to Tecson Orchids in the Philippines

DAVID N. RAMSEY

Acknowledgements to Cumberland O.S. Bulletin

Last October I visited Tokyo on business and arranged a stopover in the Philippines on the way back home. I stayed in Manila, in a most magnificent new hotel, The Philippine Plaza, arriving there in the afternoon on Sunday, 1st November. I telephoned Paul Urban of Tecson Orchids and asked if I could visit his nursery the following morning. Paul explained that Monday was All Saints Day and was a public holiday, however, as I was leaving on Tuesday, if I could catch a taxi to his wife's flower shop at 9 o'clock, he would take me out to the nursery.

I had had virtually no sleep since Friday night, so after making the arrangements with Paul, I turned up the air-conditioner and went to bed.

I did not appreciate the significance of the public holiday nor Paul's hospitality until Monday morning. All Saints Day in the Philippines is a day on which almost everything stops. Even the traffic police have the day off and the effect on the traffic, particularly the jeepneys (heavily adorned long wheelbase jeeps used as a sort of mini bus) has to be seen to be believed, like five jeepneys, side by side, full of passengers, having a race down a three lane main highway. Traffic lights are ignored and pedestrians, obviously with prior knowledge, keep well out of the way.

I had been advised to catch only the "blue" taxis which congregate around The Philippine Plaza, and not the yellow ones. I did not appreciate the difference until later in the day. As I walked down the road from the hotel to where the blue taxis were parked under clumps of palm trees, many yellow taxis pulled up offering a guided trip to the American War Cemetery or, secondly a trip to the mountains then thirdly, after I declined the trips, a girl, which I also declined.

I approached a blue taxi and, thankfully, the driver spoke English and seemed very pleased that I had picked his little air-conditioned Ford Escort. So off we went to Quezon City where I was to meet Paul and his wife Juanita, at their flower shop in the Farmers Garden at Cubao. *Paphiopedilum urbanianum* was named after Juanita Urban who discovered it. My driver was well educated and gave me descriptions and explanations of everything we passed and hurled abuse at the jeepneys as they passed us in their most erratic manner. After 20 minutes, we arrived at the Farmers Market which turned out to be a giant version of the markets here. The driver did not know where the flower shop was so I paid him and got out of the air-conditioned comfort into the heavy tropical atmosphere. I entered the market in the 'meat' section which defies description and, dodging strange-looking carcasses, walked through and came to the fish section. Just as I was considering the raptures of one of our health inspectors, in such a place, a large crate of enormous live crabs hit the floor and burst open. Dodging snapping crabs I headed for a well lit area which turned out to be the vegetable section. The smell was different although just as bad and I felt that I must be getting closer to the flowers. I found a security guard who by the badges and armory was a distant cousin of Wyatt Earp, and got directions to the flower section.

I did not expect the reception I received from the Urbans. Juanita was so apologetic that, due to it being All Saints Day and having to leave for the cemetery at 1 o'clock, she could not take me to see the orchids in the wild (they did not get back from their trip to the cemetery until 7 o'clock the next morning). It was with great difficulty that I insisted that it was I who must apologise for the intrusion. Paul drove me to the nursery some miles away. It is at his home which is entered through enormous steel gates and surrounded by an eight foot fence topped with lethal looking spikes.

I gazed in awe at the vandas, and renantheras hanging along the fences, the phalaenopsis hanging on rows of lattices, with dendrobiums in clay pots with 3 or 4 bits of charcoal on benches. Around the corner the rows of paphiopedilums and many other types of species orchids potted in the same way made me extremely envious and prompted thoughts of the difficulties we experience in trying to duplicate these conditions.

I explained to Paul that I could only carry one box of orchids back (this was really a means of restricting myself) and concentrated on a selection of paphs with a few other types. Paul's son made a list so that the plants could be packed and delivered to the hotel the next morning. Paul then drove me back to the flower shop and apologised for not being able to take me back to the hotel. As blue taxis don't congregate at

Cubao, Paul hailed a yellow taxi for me, took the driver's name and number and read the riot act to him for five minutes before allowing me in the car. I do not know what he said but the driver seemed terrified and went like a bullet from there to the hotel without uttering a sound. That yellow taxi was story in itself. It would be easier to list what it had than what was missing. I think it was a Ford Cortina but I am not sure. It did have four doors but you could fit golf balls through the gaps and one got an interesting view of the road through where the handbrake would have been if it had one, and through the holes in the floor. The dashboard was missing and the only instrument was the speedometer which had been loosely attached by brackets, however, it didn't work. To my surprise the seats were in excellent condition and very comfortable probably to make up for the lack of shock absorbers.

On arriving back at the hotel, I changed, had lunch then a swim and sat under the palm trees for the rest of the day reading a book. I booked a bus trip to the north of Luzon Island for the next day, on Paul's recommendation. The orchids were waiting for me on my return from the bus trip in a sealed box. My plane was due to leave at 10 o'clock that night so I packed, had dinner and checked out. The baggage check-in people did not seem surprised at a box of orchids so off they went. I next saw the box at the baggage collection point at Sydney. I collected it, and my suitcase and headed for the quarantine section where a girl took one look and went to get someone who knew what to do. I had filled in a QP36 form (Application for Permission to Import Plants) and handed it and the box (the contents of which I had not seen) over and received a receipt.

I had specified on the QP36 form that the plants were to be grown at the Department of Agriculture nursery at Rydalmere. Many excellent nurseries also provide a quarantine service. The plants were gassed with methyl bromide and then potted and kept in a glass-house for a minimum of three months. I recently collected the plants. All had new growth and some were in flower. Of the 89 plants I brought back 11 died in quarantine, about 40 have made only small growths and the rest are doing very well.

87 Balmoral St, Waitara NSW

Paphiopedilum urbanianum

A plant of this newly discovered species was exhibited last October at a meeting of the North Shore Orchid Society, NSW. Mr Roy Nurthen described it in their bulletin as follows:

Paphiopedilum urbanianum Fowler is a native of Mindoro Island, Philippines. I am sure that this is the first benching at a North Shore meeting of this rare and only recently re-discovered paphiopedilum species.

The benched plant, an "eye-catcher" in any company displayed broad and well-shaped leaves, dark green and densely mottled with much darker irregular green marbled markings. The flower scape 180 mm tall, densely haired, terminating in one beautifully marked flower. The dorsal sepal 32 mm long by 28 mm wide marked with a number of curved parallel green lines on a white background. The petals 12 mm broad, down-turned with a slight twist, finely striped with thin green lines at each terminal blending away to glossy, rosy-lavender tips. A small number of tiny warts were evident on the top edge of each petal. The pouch, well shaped, greenish-brown with faint dark brown veins.

This beautiful species was first discovered in 1975 among a shipment of *P. argus* sent by Mrs Juanita Urban the famous collector and nursery proprietor of Manila to Rands Orchids in the USA. Unfortunately its place of collection was not known and five years were to pass before a fresh collection from Mindoro Island positively identified the missing species.

The original plant was named P. *urbanianum* by Dr J.A. Fowlie in honour of Mrs Urban. The plant flowers in nature at an elevation of 1500-2500 ft above sea level in December, January and February the beginning of the dry season. Day temperatures range from 18°–20°C (64°–68°F) and night time temperatures drop to 12°–15°C (54°–59°F), hence it will require some warmth during Sydney winters.

This beauty was from the wonderful collection of species paphiopedilums grown by Jack and Faye Bygrave.

Patented orchid

An orchid hybrid is the subject of Australia's first patented plant. The plant is protected by existing Federal patent laws.

Although mooted for years the Plant Breeders' Rights Bill has got no further than that. The principle involved is that those who spend great sums on developing improved plants should have the opportunity of receiving reimbursement. At present a new plant can be bought by a competitor nursery and almost immediately reproduced by tissue culture in thousands.

USA, Japanese and European firms are protected by such rights. These firms are not releasing improved strains in Australia because they have no protection here. This precedent may alter their approach.

Japan now bars rights to plants from countries which do not have a Plant Breeders' Rights Law.

The Australian patented plant is *Cymbidium* Scott's Sunrise 'Aurora', HCC/OCSA, hybridised by Adelaide Orchids Pty Ltd. It has been tissue cultured.

Cultivation of *Disa uniflora* in Australia

GERALD McCRAITH
Mr McCraith is Director of the Australian Orchid Foundation

The genus *Disa* has been an intriguing group of orchids over a long period of time, for instance ten hybrids were registered more than eighty years ago. *Disa uniflora* was established by the Swedish botanist P.J. Bergius in 1767. The name was unfortunate because it is not uncommon for plants to have five or more flowers on a stem.

Disa uniflora has been the centre of attraction because of its size and colour, which can range from yellow to brilliant red. The common name "The Pride of Table Mountain" clearly indicates its native habitat. Distribution is confined to the mountains of South-Western Cape Province where it is found at various elevations from sea level to 2000 metres on mountains that are often capped with snow for months of the year.

It is found growing under varying conditions, but always where the soil is perpetually dampened by running or filtering water, a feature of the south-western Cape mountain ranges. The ideal place would be in the mosses and ferns near tumbling water, often drenched by the spray, and never where areas dry out at any time. It keeps to areas where the water is slightly acid, and is never found in limestone country.

It has been observed that the plants proliferate in the shade but rarely flower if deprived of sunlight completely. Sunlight during some portion of the day imparts vigour, strength, and also intensifies the colour of the flowers.

Because of the high level of collecting this orchid in the past, populations have disappeared from many of the regions where it has been growing for thousands of years. Fortunately very strict conservation laws are in force for its protection in its native habitat.

The climate generally is consistent with that of south-eastern Australia, where wet winters and hot dry summers prevail, and with winter temperatures that range from 32° to 45°F at night.

Fortunately, over the past twenty years or so, a band of *Disa* enthusiasts in South Africa have taken an active and practical interest in the genus. They have remade many of the hybrids that were created early in the century which, for various reasons were allowed to die out. These enthusiasts are to be congratulated and commended for their efforts in using selected clones of *Disa* species to produce perfectly formed flowers with the richest of colours. This improvement will create interest and assist the promotion of the cultivation of this intriguing and charming orchid genus.

Consistent with my attitude towards the promotion of orchids in Australia, which is also one of the objects of the Australian Orchid Foundation, I considered that the promotion of the cultivation of *Disa* in Australia was a project that should be undertaken.

The Foundation's promotion of the growth of the *Odontoglossum* Alliance has been successful in Australia, and is continuing. Now our attention is directed to the cultivation of *Disa* species in, at least, the south-eastern regions of Australia.

Over a period of time I have been interested in this species, but on the rare occasions that I've managed to obtain a plant I have managed to kill it because of my ignorance of the plant's requirements.

In recent years I was able to import two flasks of *Disa uniflora* seedlings, but alas the seedlings collapsed with a month of deflasking, which rather dampened my enthusiasm.

However, during the AOF's Esperance–Israelite Bay Expedition in August 1980 which had as its object to search, survey, and document the terrestrial objects of that remote and isolated region of Western Australia, an event occurred which resurrected my interest in disas. The expedition covered a region being surveyed for breaking up for grazing and farming, which soon destroys the natural habitat for many orchids.

One of the four vehicles used on the Expedition was owned by Mr Ron Heberle of Albany, and was equipped with a lighting plant. I was amazed when a projector was produced one night to show a collection of slides demonstrating the many varieties that occurred through the W.A. species and their natural hybrids. Dr Warren Stoutamire, a visiting American scientist, well-known for his work on pollinators of Australian terrestrial orchids, spent seven days with the party, and because of Ron Heberle's projector was able to show a set of slides illustrating his collection of *Disa* species at the Akron University in Ohio. This showing was a prelude for much conversation relating to *Disa*. As I intended going to the Tenth World Orchid Conference in Durban the following year my interest in *Disa* was immediately rekindled.

On arrival in South Africa my main object was to view a habitat if possible, and to meet *Disa* enthusiasts while I was in Cape Town. So it was with great pleasure that I was able to renew an old acquaintanceship with Professor Ted Schelpe, and most grateful of his assistance.

A few days later we visited Wilfred and Frieda Duchitt's property at Darling, where I was most interested to see *Disa* growing in quantity in their collection, along with such genera as *Paphiopedilum, Odontoglossum, Miltonia,* and *Lycaste.*

At the Tenth World Orchid Conference Orchid Show in Durban during September 1981, some hundreds of miles north-east of Cape Town, I was amazed at the great number of *Disa uniflora* and its hybrids on display. One has to appreciate that December to January-February is the main flowering period for this fascinating orchid which created so much attention at the show.

During the conference I was grateful for the long conversations with Dr Louis Vogelpoel and Mr Jim Holmes. Dr Vogelpoel has written much about *Disa,* and his articles in the *AOS Bulletin* present fundamental data about them.

Each of these gentlemen gave me confidence that the cultivation and management of the *Disa* in Melbourne would have no greater problems than those which would exist in its native habitat. Being in the same hemisphere, on much the same latitude, and with a water supply that is free from chlorine, I considered it was a matter of experience to gain confidence to successfully grow these interesting orchids.

I was able to purchase four flasks and ten plants. Two of the latter I gave to a friend from New Zealand, another met with an accident before reaching Johannesburg. My plants were potted in 12 cm pots using a coarse, very heavy gravel type of medium which appeared general practice in South Africa. The plants had had to be knocked out of their pots and wrapped in damp moss for the journey home.

After release from quarantine only three plants survived the harsh treatment for this type of orchid. Two of these, ultimately, flowered in February with a single flower on each plant. These two flowers were pollinated, resulting in two seed capsules.

The four flasks were deflasked with much ceremony and precautions against fungal attack, but all except one plant collapsed within three weeks. Friends who also brought flasks home had the same results. This was a most disappointing happening to the programme, but our considered assessment, because of the knowledge we have since gained, was that the seedlings had been in the flasks *too* long.

At this stage I enlisted the assistance of Cliff Grosvenor and Ronald Pearce. Cliff is a wealth of botanical knowledge and has had considerable past experience with *Disa.* Ron's task was to try different media for the flasking procedures.

Learning of our interest in *Disa,* a friend sent a batch of *Disa* seedlings that were in a very bad way. After inspection I considered them a dead loss because of rot and fungal attack. These were handed over to Cliff who patiently cleaned those that were possible survivors. These improved to become subjects for experimentation.

The two seed capsules matured 35 days after pollination. Half of these went to the flasking experiments, and the other half used in procedures as outlined by Dr Louis Vogelpoel in the September 1980 issue of the *AOS Bulletin.* We used an aluminium section 75 cm long and 25 cm wide, having three longitudinal valleys or tracks. The section was raised 12 cm at one end and the tracks fed with water on the drip principle so that when the valleys were filled with sphagnum moss there was a movement of moisture at the base of the moss throughout the year.

Another portion of the seed was sown on trays of boiled moss, and watered once a week by placing in another tray containing water 25 mm deep for twenty-four hours. During the summer this procedure was increased to twice a week. Germination took place about six weeks after sowing. Growth was rather slow for it took twelve months for the leaves to be about 25 mm long. Roots began at this stage for the more advanced seedlings. Up to this stage no overhead watering was permitted.

At this stage the more advanced of the seedlings that had been flasked had leaves 5 cm long with a nice hairy root system beginning to move along, allowing some to be deflasked. In two more months these deflasked seedlings were twice their size and growing in 5 cm tubes.

Some seed was sown on green sphagnum but the moss grew too vigorously and smothered the seedlings. Other seed was used in a peat moss type mix, but this proved a failure because of the algae growth and the subsequent mosses and liverwort.

Because of the small number of plants in our possession we had to determine whether to use pure sand, or a finely crushed sandstone mix as recommended by South African growers. There was also the moss, perlite, and peat mix recommended by Stoutamire. We decided to use Tasmanian sphagnum moss as the growing medium.

This was an important decision to make because we had a shipment of fifty plants that arrived in good condition, but only thirty-four of these survived in the quarantine period. The surviving plants included clones of *Disa uniflora, D. tripetaloides, D.* Kewensis, and *D.* Veitchii.

Because of the limited number of plants in our possession we have been most hesitant to experiment with potting media. As our supply of seedlings advance we expect to be able to experiment and find other proven mixes.

Disa growth cycle is vital to culture

Photos: Gerald McCraith



1

Pot showing growth appearing from the lower drainage hole. Also shows the old flowered growth ready to die off and the young growths that become the main plant for next year.



2

Clearly shows the old growth that has flowered — ready to die while the new growth becomes the plant to flower next year.



3

The pot removed to reveal the tuberoid and the rhizome extensions show white against the moss. The roots and tuberoid are much the same colour as the moss.



4

Shows the growths separated and cleared of moss — the tuberoids are clearly seen. These become four individual plants. Several rhizome extensions show rosettes suitable for small pot growing-on.



5

Shows the old and the new. The tuberoid of the older growth has already collapsed. The strong new growth has the rhizome extensions already on the move to make up into a nice plant in the next season.

An interesting segment of our tests revealed that *Disa* can withstand zero degrees Centigrade. In the shelter of a small shed facing east, and under a defoliated peach tree, *Disa uniflora* in 7 cm square pots have been growing on a bench with a number of *Dendrobium kingianum* clones for longer than twelve months. Throughout the winter of 1982 frosts were most severe for Melbourne. The leaves of *Dendrobium kingianum* were badly burnt. Although the *Disa* were in wet sphagnum moss, and must have been frozen or very close to it, no damage occurred to them. At this time a fish pond nearby had a cover of 12 mm of ice. Seven plants of this batch flowered January and February this year.

Plant morphology. It is important to understand the anatomy of the plant and some of the characteristics that make it so unique as opposed to other orchids.

The fleshy leaves radiate irregularly, giving the appearance of a pineapple top. These leaves attract slugs, so precautions must be taken. Red spider is another pest known to affect them.

The flowering growth with its tuberoid will die soon after flowering. Throughout the previous twelve months a new growth will have been coming away from the main stem and will have formed its own tuberoid to become the main plant. At the same time other new growths may occur. These rhizome extension growths will be the reward of good culture.

The genus *Disa* does not have a dormant season as we would know dormancy of the Australian terrestrial orchid, where growth and flowering takes place in the cooler months of the year. The growth of *Disa* appears to slow up in winter, but activity is continually taking place below the surface of the potting medium.

Disa should be treated as a semi-bog plant, never allowed to dry out at any time. The density of the moss should be moderate and not over tight. If the pot is left with its base continually in water, sourness will surely result with disastrous results.

Shading at 50 per cent should be sufficient at any time of the year. Plenty of fresh air is most essential, otherwise fungal attack may occur suddenly. A warm stuffy atmosphere will also induce disastrous results.

Because of the use of sphagnum moss no fertiliser has been used throughout the duration of our experiments. The growth has been considered as satisfactory, and the root system remains in a very healthy condition.

Water is a product that will require study in future tests. We know the aerated water from a mountain stream is full of oxygen, while still water can become devoid of it. The water supply from some systems varies considerably in lime content. Too much lime will soon kill sphagnum moss, and is certainly not ideal for disas.

We lost two plants last flowering season by disregarding good advice in allowing them to flower when there were no new growths or offshoots coming away. The result was that the plants flowered and soon after collapsed and died, having fulfilled their function.

Our studies have allowed us to recommend repotting to happen in early May or late August, with preference for early May. This must be a careful operation because the connection between the plant and tuberoid is very brittle. The old recently flowered portion of the plant would have collapsed, or very close to it, and can be discarded. Possibly a number of offshoots or rhizome extensions will be found wandering around the root system or already grown above the potting medium — often some will find their way out through the drainage holes. These can be moved and grown on separately, or may be left attached to that portion of the plant.

Any potting material that will break down readily will not be used at any time.

The plants can be repotted each year, or if desired, and the plants and potting medium are in good condition repotting may be left another year. They will have to be repotted in the second year because of the mass of roots and new growths that will result.

Plastic pots appear to be the best vessel but the side drainage holes should be enlarged, not only to allow better drainage but to allow an input of oxygen to the potting medium.

After a good soaking the previous day the plants can be knocked out of their pots without harm, and inspection can be made of the root and offshoot system.

In conclusion, may we say that providing cold nights can be given through the winter, a reasonable amount of light, and a nice moist environment throughout the summer, and fresh air at all times of the year, you will have no trouble in growing these very colourful and interesting orchids.

Material cited and recommended for study, being articles from the *American Orchid Society Bulletin:*

Disa uniflora and its hybrids, Kenneth Johnson, Feb. '69.

Disa uniflora and Disa Veitchii, Warren Stoutamire, May '77.

Disa uniflora, its culture and propagation, Louis Vogelpoel, Sept. '80.

Disa species and their hybrids, Louis Vogelpoel, Nov. '80.

Cultivating Disas in Ohio, Warren Stoutamire, Oct. '81.

Those desirable Disas, Carmen Coll, Jan. '80.

107 Roberts St, Essendon, Vic. 3040

The genus Disa offers growers a new challenge



Disa uniflora

Knowledgeable orchid folk rate *D. uniflora* as the most beautiful terrestrial orchid in the world. Now that Gerald McCraith has shown they can be easily grown, growers all over Australia will be able to judge this for themselves.

***Disa* 'Foam'**

At time of going to press there was no evidence of RHS registration. The cross is *D.* Betty's Bay x *D. uniflora.*

From 1891 to 1922 thirteen disa crosses are recorded, then no more until two in December 1981 and three in October 1982.



Photos: G. McCraith

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Our new list will be available September/October 1983 and will contain native hybrids, exotic species, cool-growing oncidiums, equitant oncidiums, cattleya alliance hybrids, miniature softcanes and miscellaneous hybrids.
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A note on *Dendrobium bigibbum* var. *compactum*

S.C. CLEMESHA

Dendrobium bigibbum Lindl. ssp. *bigibbum* var. *compactum* C.T. White, *Australian Orchid Review* 6 (1941) 53.

D. bigibbum Lindl. ssp. *bigibbum* var. *phalaenopsis (Fitzg.) F.M. Bail. forma compactum* (C.T. White) G.L. Piper, *Australian Orchid Review* 15 (1950) 40.

D. bigibbum Lindl. ssp. *bigibbum* subvar. *compactum* (C.T. White) St. Cloud, *North Queensland Naturalist* 24, no. 115 (1956) 18.

D. bigibbum Lindl. ssp. *bigibbum* forma *compactum* (C.T. White) St. Cloud, *North Queensland Naturalist* 24, no. 115 (1956) 18.

D. bigibbum Lindl. ssp. *bigibbum* var. *superbum* Hort. ex. Reichb.f. subvar. *compactum* (C.T. White) Dockrill, *Australian Indigenous Orchids* 442 (1969).

Since its first publication in 1941 *D. bigibbum* var. *compactum* has been given five different names (including its original). It also was considered by some to be an unstable habitat form.

When I published my review of *Dendrobium bigibbum* Lindl. in *The Orchadian* Vo. 6 (December 1978) 2 I used *D. bigibbum* ssp. *bigibbum* var. *superbum* subvar. *compactum* as the name for var. *compactum* as it seemed to me that it was applicable even though long.

I have noticed since however that most orchid enthusiasts and societies use the name *D. bigibbum* var. *compactum* and those who attempt to use one of the other more complex names seldom do so correctly. Clearly the simplicity of the name *D. bigibbum* var. *compactum* is a point in its favour but there are other considerations as well.

The difference in the pseudobulbs of var. *compactum* is very different to those of the other *D. bigibbum* variants. It now has been proved that it comes true from seed and that hybrids from it show the influence of its dwarf habit.

Flower racemes of var. *compactum* usually have fewer flowers than those of the other *D. bigibbum* variants and though variable its petals show a tendency to be more cut away from the dorsal sepal than do other *D. bigibbum* variants.

The habitat of var. *compactum* is isolated from that of *D. bigibbum* var. *superbum* and prior to its near if not total termination there by orchid collectors it was breeding as a separate community.

I think the differences between var. *compactum* and its nearest relative var. *superbum* are great enough to justify varietal separation.

In other cases of species involving more than two varieties it is usual procedure to treat each as a separate variety and not one as a subvariety of another e.g. *Diuris punctata* var. *longissima* and *D. punctata* var. *albo-violacea* which are more closely related to each other than to *Diuris punctata* var. *punctata*.

I therefore recommend that the name *Dendrobium bigibbum* ssp. *bigibbum* var. *compactum* be applied.

The names of the *D. bigibbum* complex are as follows:

D. bigibbum Lindl. ssp. *bigibbum* var. *bigibbum*.
D. bigibbum Lindl. ssp. *bigibbum* var. *superbum* Hort. ex Reichb.f.
D. bigibbum Lindl. ssp. *bigibbum* var. *compactum* C.T. White.
D. bigibbum Lindl. ssp. *laratensis* S.C. Clemesha.

In general use I would advise the names to be used as follows:

D. bigibbum var. *bigibbum*.
D. bigibbum var. *superbum*. (The Cooktown Orchid)
D. bigibbum var. *compactum*.
D. bigibbum ssp. *laratensis*. (Formerly popularly known as *D. schroederanum*.)

Lot 6, Skinner Close, Avocado Heights 2450.

Superb species journal

The Orchid Species Society of Victoria is to be commended for the high standard of its journal. At the moment this is only produced every second month, but the quality of each issue is outstanding. So much so that species growers from other states might well subscribe just to get the journal. Full subscription is $10.00 per year. Enquiries can be sent to the editor, Mr Peter Adams, PO Box 211, Heidelberg, Vic. 3084.

Comments on plants benched include details of background and culture. The July issue summarises a talk on orchid photography by Mr Ted Rotherham, famous for his wildflower publications. It has a fine article by Professor R.T. Holman on orchid fragrance; one on orchids in national parks; and details on growing *Disa uniflora* by Mr Cliff Grosvenor who has grown them for years.

ANOS GROUP FORMED IN TASMANIA

This Australian Native Orchid Society Tasmanian offshoot is off to a good start. It has been named ANOS Bass Group. Secretary is that very able grower Mrs Gwen Smith, RSD 793, Kindred, Tas. 7310.

The group meets on the fourth Wednesday of the month at Hellyer College, Burnie. Subscription is $5.00 for an individual or a husband and wife team.

Natives grow well in northern Tasmania and the group is bound to enhance the future of orchid growing there.

•

The life-span of an orchid is, in theory, endless. They never die of old age, and are only killed by accident or misunderstanding of their needs.
— B. and W. Rittershausen in *Orchids as Indoor Plants.*

Clonal Propagation of the Genus *Paphiopedilum*

Propagation of *Paphiopedilums* by mericloning has been beset by problems of low survival rates and an apparent inability to develop lateral propagules.

In 1982 studies were initiated in an attempt to understand and ultimately overcome the physiological and developmental blocks to the proliferation of lateral buds.

A number of experimental approaches were based on the hypothesis that strong apical dominance is probably the cause of poor lateral bud development. This hypothesis is consistent with the normal flowering behaviour of this genus.

Attempts were made to diminish apical dominance in intact seedlings and isolated meristems, growing on solid media, by exposing cultures to various conditions known to be involved in the control of this developmental phenomenon: manipulation of the balance of an auxin (2, 4-D) and a cytokinin (Benzyladenine), physical damage of the main shoot apex of isolated meristematic regions and continuous rotation of cultures so as to remove gravitational effects.

Results to date suggest that, of all the conditions tested, continuous rotation resulted in the greatest increase of visible lateral growths. Furthermore, microscopical examination of sections through a number of specimens revealed the presence of additional lateral meristems that were not externally visible. It should be noted that the 1982 experiments had run for only 16 weeks before they had to be terminated and it is reasonable to expect that treatment differences would have been greater if those cultured had been allowed to develop for a longer period of time.

The 1982 results, although limited in scope, tend to support the premise that the poor performance of *Paphiopedilums* under normal commercial practices may be due to strong apical dominance. Therefore, it is proposed to refine and expand treatments aimed at diminishing the effect of apical dominance. For example, the use of whole plants or isolated meristems may not provide the best starting material for subsequent manipulation because such tissues have developed under gravitational conditions that promote the establishment of strong apical dominance which may not be easy to alter. Consequently, one of the approaches in 1983 involves the development of callus cultures free of apical dominance and hence capable of producing many protocorms. Such cultures can be produced by starting with free cell cultures in constantly agitated liquid media, then transferring selected cells to solid media and rotating continuously. End result may be stock cultures that have never experienced constant directional gravity and thus be useful for subculturing.

Other treatments, e.g. manipulation of hormone and/or nutritional balances in the media, may have to be introduced to enhance any advantageous effects of the basic procedure.

It is hoped that these approaches will establish a reliable procedure for the clonal propagation of *Paphiopedilums* that may be adapted to commercial practices.

The above studies are being supplemented by parallel light and electron microscope investigations at various stages of development so as to establish any anatomical and cytological features that may contribute to the understanding of the behaviour of *Paphiopedilums* under normal and experimental conditions. In these studies comparison will be made with at least another genus, e.g. *Cymbidium*, that does not present the propagation problems of *Paphiopedilum*.

It is anticipated that a progress report on 1983 results will be available for publication in the December issue.

Help for project

Since announcement of the Australian Orchid Foundation research project on clonal propagation of paphiopedilums there has been a wonderful response from societies and individuals.

To keep the project going to the end of 1984, and this is vital if there is to be a chance of success, continuing support is necessary. Contributions are tax deductible and may be sent to Australian Orchid Foundation, 107 Roberts Street, Essendon, Vic 3040.

Sunburn? Do not react by giving the plant deep shade because the plant will be doubly deprived. First by having less leaf area from the sunburn to absorb light, second by receiving less light from the shading. For the same reasons excess watering should be avoided. Reduce the factor(s) causing excessive heat but maintain as much light intensity as possible.

Tasmanian orchid classes

Hobart growers can attend classes conducted by Adult Education. Tuesday night classes start on 20th September. They will be conducted by leading expert Mr Ron Riley and will cover all aspects of orchid culture, particularly growing orchids in an unheated glasshouse. For details phone Mr Riley on 43 8173.

BEGINNERS' SPECIAL

A cultural system for cymbidiums

LINDSAY PASCOE

Acknowledgements to the Gosford O.S. Bulletin

Given the right growing conditions, cymbidiums will grow vigorously and flower profusely. By asking questions, reading and experimenting, I have found some of the answers that seem to work. Some of these ideas may be adapted to suit others.

Shade House. Construction is of galvanised pipe with a roof-height minimum of 2.2 metres. The growing section is covered with 50% woven shade cloth; the flowering section with pearl-white fibreglass to avoid rain spotting of blooms and to enhance colour. Avoid green fibreglass roofing as this washes out and alters the colour, spoiling the flower.

Benches. These are of galvanised pipe with arc-mesh tops. Height is about 0.6 metre to permit handling of pots at a handy level. These benches seem to discourage snails, and allow free air movement to stop fungal troubles. Under the benches, there is an 80mm layer of sawdust to maintain humidity.

Pots. Black plastic pots are used; these are light, cheap and clean, last well and are easily sterilized. The only clay pots used are for the red 'Sensations', which can be temperamental: they seem to prefer drier root conditions, and must be planted higher in the pot than most other cymbidiums.

Potting mix. This is crucial for success. The mix MUST be open and friable. If it is at all muddy, the plant will drown. Too much water retained in the pot will cause root-rot, bulb-rot and complete breakdown. The basis of my mix is composted sawdust and shavings from softwood (4 parts) and fowl manure (1 part), this is heaped, moistened and turned, over a period of 8-10 weeks. Bacterial action causes the heap to generate a lot of heat, quite enough to kill any grass seeds and to sterilize the materials. This compost is usable as soon as the heap cools down. The mix used in pots is as follows:

2 measures of the above compost
2 measures of peat moss
1 measure of rice hulls
1 measure of **fine** pine or oak bark
1 measure of peanut shells
1 measure of coarse washed sand
1 measure of fine charcoal
2 measures of polyurethane
plus 2 tablespoons of dolomite and
1 tablespoon of superphosphate per
2 gallon bucket of the mixture.

This potting mix does not break down for at least two years, and will allow complete drainage and root aeration.

Re-potting. This is done as soon as flowers are removed, which is no more than ten days after the last flower on a spike opens. This is usually in September or October, but earlier with the new early flowering varieties.

Watering. Too much retained water will kill cymbidiums, but you cannot over-water if your mixture is right. Damp but not wet, is the pot condition to aim for. I water daily from November to April, then taper off to only once weekly in winter.

Fertilizer. Our best results have come from the regular use of "Campbells Special Orchid Fertilizer" throughout the year, and following the makers instructions; the blue soluble powder in the growing season, and the yellow (low nitrogen) soluble powder from inception of the spike to end of flowering.

Flowering. The initiation of flowering spikes is promoted by a temperature drop at night in February, and by a trigger fertilizing treatment once only, also in February. The temperature drop is achieved by mist-spraying all flowering sized plants each evening in February between 6.00 and 7.00 pm. In addition, each of these plants gets **one treatment** of one tablespoon of dry powder scattered round the **edge** of the pot. This powder is a mixture of 3 parts super-phosphate, 1 part magnesium sulphate (Epsom Salts), 1 part sulphate of potash (or muriate of potash) and 1 part blood and bone. This then waters down through the pot with each watering.

Pests and Remedies.

For red spider use Kelthane
For bugs, caterpillars use Carbaryl
For fungus use Captan or Benlate
For snails use Baysol (blue pellets)
For virus use the incinerator.

Hygiene. To avoid carrying troubles from one plant to another, use soap and water freely, and disposable paper towels. Secateurs are immersed in methylated spirits or Chlorize mixture. Trash and dead leaves harbour all sorts of wogs, and should be regularly removed from the plants. Dying leaves may easily be moved by splitting them down the middle and gently pulling off each half at a time. Space under benches should be kept clear of grass or plants as these harbour snails and various pests, and can

form a ladder for the invasion of your prize plants.

Recommended Cymbidiums. Because some plants are shy-flowering, others temperamental, and others with blooms of dull colour poor shape or limp texture, there are listed here some plants which are vigorous of growth, reliable in blooming and of good colour and quality.

For Winter Shows	**Standards**
Valley Song 'Maureen'	(white)
Maryvale 'W.S.'	(red)
Arcadian Sunrise 'Golden Fleece'	(yellow)
Lunagrad Elanora 4N	(green)
Intermediate or Miniature.	
Sarah Jean 'Wondabah'	(green)
Gareth 'Latangor'	(saffron)
Leodogran 'Cradlemont'	(pink)
Beacon Fire 'Cecil Park'	(red)
Wakakusa 'N.B.'	(green pure colour)

For Spring Shows.	**Standards**
Highland Mist 'Barrita'	(white)
Balkis 'Captain Anderson'	(white)
Anita 'Carlingford'	(pink)
Narela 'Jennifer Gail'	(pink)
Featherhill 'Heritage'	(red)
Burgundian 'Sydney'	(polychrome)
Dr Lloyd Hawkinson 'Piedmont'	(green)
Valya Craig 'Sutherland'	(gold)
Mallana 'Mem. Caroline Hargraves'	(yellow)
Intermediate or Miniature.	
Olymilum 'White Elf'	(white)
Showart 'Glamour Girl'	(white)
Showgirl 'Kate Hepburn'	(cream)
Dagonet 'Pink Beauty'	(pink)
Kyancutta 'Sweet Lorraine'	(pink)
Ivy Fung 'Radiance'	(red)
Ruby Eyes 'Red Baron'	(dark red)
Tom Thumb 'Calliope'	(green)
Evening Star 'Pastel Princess'	(yellow)

42 Glenn St. Umina 2257

Blc. Bullion 'Dundas'

Owners and judges please note that the above name is incorrect. The correct name is *Blc.* Sylvia Fry 'Dundas', AM/AOC-NSW. The AOC Award number is 398.

Under the incorrect name awards were made to this clone as follows:

22/6/80 No. 323 H.E. Sheaves	NSW No. 1031
9/7/80 No. 315 L. & M. Heinemann	QLD No. 157

Please adjust records and labels.

Cattleya Portia 'The Baroness', CCC/QOS

W.N. HORSFALL. *Illustrated on front cover*

My clone was purchased from Mr Cliff James in 1973 or '74 from his nursery which, at that time, was at Broadbeach, Gold Coast. When purchased it had three pseudobulbs with a new lead emerging.

Mr James, in those days made many trips overseas to buy orchids for his mericloning programme which he was developing. He bought a large clone of *Cattleya* Portia from Artur Elle & Co, Orchideen Farm, Hambuhren, in West Germany. This label is still on the plant. Mr James divided the original into a number of plants of which mine was one. It has always been a particularly good grower sending out new leads several times a year and like all *C. bowringiana* hybrids, the root system seems to be more resistant to rot than a lot of other cattleya hybrids. This blue form is often referred to as *'Coerulea'.*

The plant has never been divided but on a few occasions I have cut a couple of pseudobulbs with a new lead from the plant and these seem to establish quickly when potted up. Each time the main plant has been potted on, it has pleased and amazed me to find the roots have been in such good condition, quite filling the pot with a solid mass, so what I have done on the last two occasions is to place a couple of inches of styrene foam pieces in the bottom of the pot and then fill in around the sides with cork, pine bark and charcoal pieces. The plant is now in a sixteen inch pot.

This plant, as with all the cattleyas in my collection, is grown under 50 per cent shade cloth in a house which faces north; the southern and western side walls have protection from the cold westerlies.

The plant, again as with all the others, is fertilized once a week during winter and summer with half strength soluble fertilizer, Aquasol, Garden Gold or Thrive. The additional watering programme varies with the weather conditions; from every second day during very hot weather to one other watering between fertilizing in cooler months. Light misting is done twice a day during very hot dry weather and even during dry winter weather, in an effort to keep the humidity as high as possible at all times. Gravel under the benches is kept damp by hosing twice a day also.

No regular programme of pest or fungal control is carried out, as it is thought best to treat troubles as they occur.

Solar St, Coorparoo, Q'land 4151.

THE DAWN OF HOPE

IAN WHITCOMBE

My main interest as a hybridist is directed at producing compact, free flowering standard cymbidiums for the pot-plant trade. My nursery has been small, limited to about 3,500 sq. feet, and the most urgent need has been for breeding plants capable of producing the widest possible range of colours and types, from a limited number of crossings.

In the longer term my concern for the future development of cymbidiums is the relative flatness of much of the genetic material readily available; in the case of many high colour lines they are up to 7 and 8 generations removed from species, and, unless they are well matched each succeeding generation only serves to further flatten the genetic characteristics, and leads to less and less variation in the seedlings.

The situation is not yet desperate, but urgent steps need to be set in motion if we are able to maintain the element of change and variation in our seedlings. This lack of variation may well be an advantage to the grower who needs a large population of similar flowers, however this requirement is probably better met with mericlones.

My decision was that if I am to meet the requirements of my customers, there must be potential for rapid change and infinite variety in my hybrids. To attain this goal I believe the need is for peaks, not flatness, in the genetic make-up.

I do not intend to imply that I have any technical or scientific knowledge of genetics. The graphic charts presented here grew out of my study of cymbidiums from the point of view of a practical nurseryman, and I firmly believe they can greatly assist each hybridist achieve his particular goal.

From this study came the idea for what I now call Quantitative Genetic Charts. I had always found it difficult to come to terms with the concept of the family tree as a diagnostic tool, breaking this down to fractions of individual species helped little.

To create these graphic charts, you will have to reduce the fractions to percentages, and draw them up as bar charts.

I find this graphic approach gives me an instant appreciation of each hybrid, its potential, and what can be done to improve or change it in various ways.

I believe these charts to be an original concept – if however they have been published before, then I willingly bow to the originator.

The results I have obtained from planning with their aid are not so much the end result of years of work, but only the first glimmer, or **Dawn of Hope**, that my philosophy as a hybridist is beginning to bear fruit. While the parents used in these trials were not as dramatic genetically as I would have liked, they were the best available at the time.

As it is, the range of colour and types produced by our selected parent, *Cymbidium* Sleeping Spring 'Sandon' has been staggering, and the overall size and quality of the flowers very high.

During the southern spring of 1982, a number of these clones were exhibited for the first time, at shows in the Melbourne area. These entries resulted in:

Champion Cymbidium
Reserve Champion
7 Firsts
5 Seconds
Group of 4 Distinct Clones

Also most Successful Exhibitor in three out of four shows attended.

All this from what started out to be pot-plants for the consumer trade!

We must now go back to when I was collecting plants to establish a gene bank. I was attracted to two clones in particular:

Sleeping Beauty 'Sarah Jean'
(see bar chart)
Claudona 'Rajah' (see bar chart)

At the time they were tightly held, I had to go on to other plants for immediate use in the breeding program. Although researching the clones available to me at the time, I was always drawn back to those very unlikely bedfellows.

My constant speculation was, would they blend to give the clone I needed to produce quality flowers, over a full range of colours, including pure colours, from a limited number of crossings. In the end I was convinced that they could.

C. Sleeping Beauty 'Sarah Jean', is a small white pure colour, a free flowering compact plant, known to throw good size and shape. It had emerged from breeding initiated by Alvin Bryant, the innovative Sydney hybridist.

A close look at its background, indicated that unlikely as it may seem to the casual observer, the strain did, in fact, carry a moderate level of high colour genes from *C. i'ansonii* and *C. schroederi.*

C. Claudona 'Rajah' is of English origin, having large flowers of a nondescript colour. I was attracted by the huge, dramatic labellum, and a good level of high colour genes from *C. schroederi*. *C.* Claudona is basically a green cross owing to the dominance of *C. grandiflorum* over *C. lowianum*, but it should not be difficult to mate it to breed pinks and reds.

I often speculated on whether the shape potential of the Sleeping Beauty could overcome the slightly floppy Claudona, and yet retain its size and dramatic labellum.

Up to this point, not being able to purchase these clones, I was delighted to see the cross I craved advertised by Valley Orchids, of Adelaide.

I purchased a batch and several years passed, finally one seedling was selected to breed on; it appeared to have the best qualities of both parents, and then some.

Here, at last, was *Cymbidium* Sleeping Spring 'Sandon' — and on it rested my hopes for a new generation of high colour dramatic flowers, that would help project cymbidiums into the 21st century!

Sleeping Spring was first flowered and registered by Valley Orchids, the hybridist Dr Van Dyke of Sydney. I believe he made the cross with the mistaken expectation that it would produce pure colours.

C. Sleeping Spring 'Sandon' is an apricot polychrome of very heavy substance, slightly rectangular in shape, and decorative in habit; however the important factor is in the balance of genetic characteristics, which can be very easily manipulated to produce a wide spectrum of colours and types, including a percentage of pure colours, if correctly mated.

The significant amount of *parishii* (8%) should contribute size, shape and heavy substance.

Also the balance between *C. lowianum* and *C. grandiflorum* will allow for easy manipulation to breed either greens, or into the yellow and red zones.

Initially three crossings were made to establish the breeding potential of *C.* Sleeping Spring 'Sandon', from this point on, theory was put aside and waiting for results began.

C. Dawn of Hope (= Sleeping Spring 'Sandon' x Sensation 'Vieux Rose'). The proven breeder of reds, Sensation 'Vieux Rose' was used to test the pink to red potential. The results greatly exceeded my expectations — to date we have flowered many large and shapely varieties, from clear to rich polychrome pink, and salmon through to deep rose red, and intense shades of orange and terracotta — then for good measure, earthy and orange browns — most of them carrying large, dramatic labellums.

C. Eastern Star (= Sleeping Spring 'Sandon' x Wyanga 'Elanora'). *C.* Wyanga 'Elanora' was used to establish the pure colour potential of Sleeping Spring 'Sandon'. We expected green to dominate this cross, with yellow as a secondary factor. The introduction of *C. tracyanum* from Wyanga brings these into flower three weeks earlier than the Dawn of Hope seedlings which flower from the end of September to early October in Melbourne. Certainly there have been many greens, both normal and pure colours—however none the less striking have been the yellow pure colours. These ranged from buttermilk to rich vibrant yellow, along with some beautiful pastels and sought-after spotted varieties.

C. Golden Spring (= Sleeping Spring 'Sandon' x Wyalong 'Wondabah'). Yellow and red should dominate here, as in Dawn of Hope — the variable we are testing here is the mystery natural hybrid Ruby, which represents 12½% of Wyalong. Only a few of these seedlings have been flowered to date, one Golden Spring "Sovereign" was of excellent shape, and old gold in colour. However we expect many richly coloured clones to follow.

At least 100 seedlings of these crosses have been flowered, and there is now no doubt in my mind, that we have found one of the parents we need to produce an endless range of dramatic new colours and types.

During my years as an orchid nurseryman, I have been told many times that cymbidiums have been developed to their ultimate limits, so *why* spend more time and effort!

But now I have my answer, a whole galaxy of superb quality flowers, in many totally new colours that have burst from this single effort, to see what was asleep in two very unlikely bedfellows.

6-14 Plantation Rd. Corio, Vic. 3214

OVERLEAF

Six of Mr Whitcombe's bar charts showing the species influence inherent in each are shown on the next page. The grexes represented in each chart are those mentioned in the article.

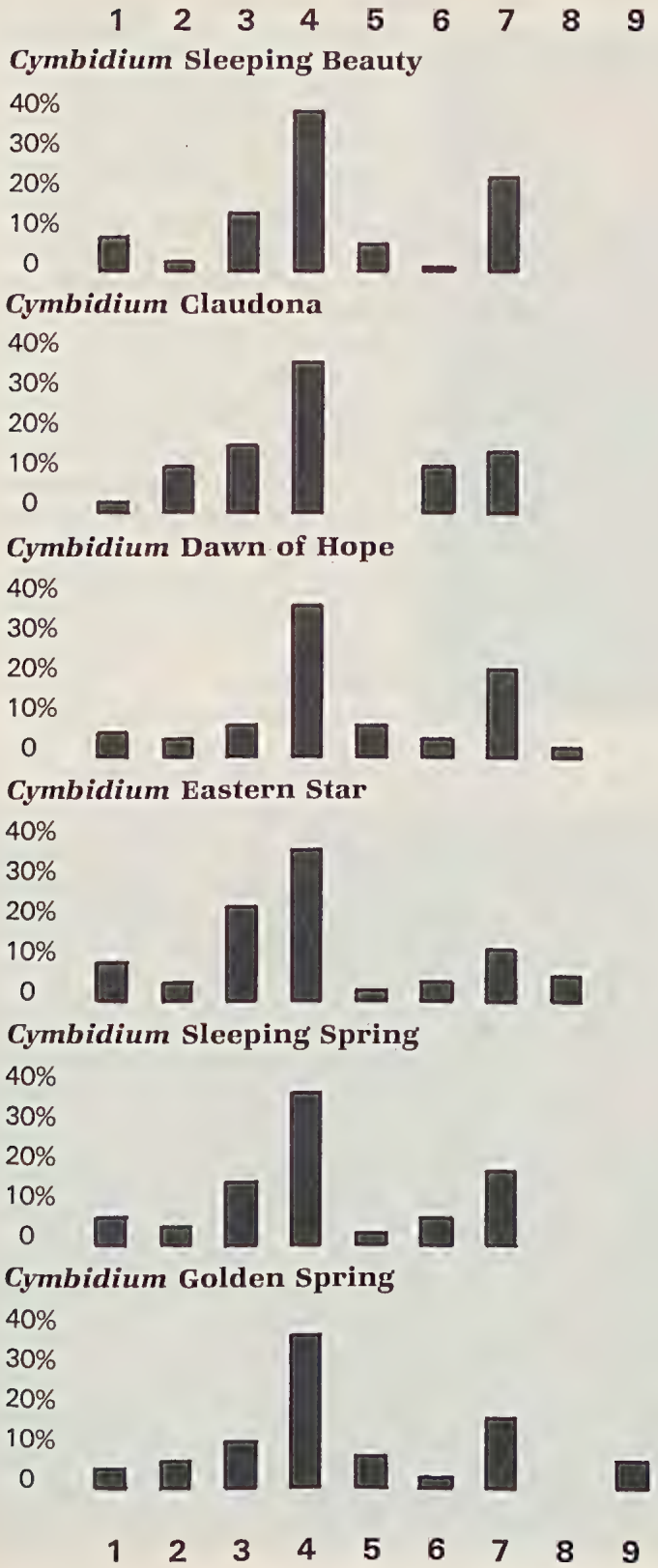
For anyone wishing to refresh their memory on the characteristics of each species shown on the bar charts a short summary of each is appended.

Unfortunately species cymbidiums are seldom benched these days.

Note the powerful influence of *Cymbidium insigne*, a species no one seems to grow nowadays.

Cymbidium lowianum has also exerted a strong influence and to it we owe floriferousness in modern hybrids. It has also influenced colour.

Ian Whitcombe's bar charts give clues to hybridising potential



Numbers indicate species. Bars show percentage of species in pedigree.

1. ***C. eburneum***
2. ***C. parishii***
3. ***C. grandiflorum***
4. ***C. insigne***
5. ***C. i'ansonii***
6. ***C. schroederi***
7. ***C. lowianum***
8. ***C. tracyanum***
9. ***C.* X Ruby (natural hybrid)**

Mr Whitcombe's charts can convey a great deal of information to those familiar with the species concerned. Studied in conjunction with his article they can be useful in making decisions on which seedlings to buy. To assist new growers notes on the species involved are appended.

It is important to realise that production of improved hybrids could only have resulted from using the best clones of the species named, and the best of each cross made. There is much variation among the clones of species and hybrids in colour, shape, and size. Superior and awarded clones are usually given a cultivar epithet and this, under the rules of nomenclature should appear in single quotes after the registered name. Knowing which clones have been used in a breeding line can be vital for hybridisers and important to seedling buyers.

The ploidy is also important and the emergence of a few spontaneous tetraploids, that is clones with double the number of chromosomes, has had as much to do with the high standard reached in today's showbench flowers as any other factor.

Mr Whitcombe's charts are a very useful indication of species influence. For information on influential clones in the breeding lines refer to J. Rentoul's book *Growing Orchids — Cymbidiums and Slippers.*

Mr Whitcombe has promised a further article on his methods of appraisement for breeding potential.

Species in the charts

Of the ninety or so cymbidium species only a very few are involved in the genetic make-up of modern standard type hybrids.

The most important species not described here is *C. erythrostylum* which has had a powerful influence in breeding for early flowers and extending the bottom part of the flower. Rare use has been made of *C. triginum* and *C. masterii* (syn. *Cyperorchis masterii*).

1. *C. eburneum.* A species from northern India's Khasi Hills. It has been influential in breeding lines for its good textured and shapely flowers, predominantly white. There are only one or two flowers to a stem, each about 75 mm wide. A touch of gold in the keels and yellow in the labellum centre has passed to many of its hybrids. As also the habit of fewer flowers per raceme.

2. *C. parishii.* A species considered by most botanists to be the Burmese variety of *C. eburneum*, but for RHS registration it is regarded as a separate species. The Sanders nursery had a fine form they called *C. Parishii Sanderae* which was used as a parent on ten occasions up to 1946. Seven of these hybrids emanated from H.G. Alexander, two from Sanders, and one from McBeans.

The correct name for this variety is *C. eburneum* var. *parishii* 'Sanderae'.

In assessing potential it is as well to combine the percentages for *C. eburneum* and *C. parishii.*

3. *C. grandiflorum.* This name is used for registration purposes. However *C. hookerianum* is the correct name because it was the first given. It carries up to 12 green flowers on a long stem, the cream labellum being heavily spotted with red-brown. It comes from the high cold areas of northern India and flowers in winter. Strong yellow and green genes have been passed to its hybrids, also has a pendulous spike habit. A tendency to bud-drop in warm areas has largely been bred out of its hybrids.

4. *C. insigne.* A warm growing terrestrial species from Vietnam, characterised by round bulbs and long narrow leaves. Flower colour is pink in most clones, but some have white segments with pink at the base. Lips are rose red marked with purple red. The variety *sanderae* is a particularly fine form.

Extensive use of this species in hybridising is indicated by its percentage dominance in each of the graphed hybrids. Tetraploids from two of its hybrids, *C.* Alexanderi 'Westonbirt' (Eburneo-lowianum x *insigne*) and *C.* Pauwelsi 'Comte de Hemptine' (*lowianum* x *insigne*) have been two of the most influential parents in the genus cymbidium. Possibly only *C.* Balkis (Alexanderi x Rosanna) could be ranked with them.

5. *C. i'ansonii.* This species from upper Burma is believed by some authorities to be a natural hybrid but this has never been satisfactorily established. Racemes have up to fifteen large yellow flowers with red-brown striping and a strong yellow w-mark on the front lobe of the lip. Crossed with *C. insigne* it produced *C.* Ceres, a grex which included the first good reds. The best reds available today can be traced back to *C.* Ceres 'F.J. Hanbury'.

6. *C. schroederi.* A Vietnam species smaller than but similar to *C. giganteum.* Flowers are pale green to cream with red-brown stripes and blotches. It has been little used in hybridising but is in most breeding lines due to the use of the natural hybrid *C.* X *cooperi* which is regarded as being from *C. insigne* and *C. schroederi.* The same cross was nursery made before the discovery of *C. schroederi* and was named *C.* J. Davis.

7. *C. lowianum.* Also from the Khasi Hills and Burma. Racemes grow to a metre long with from 15 to 25 flowers, each up to 10 cm wide. Flowers last up to twelve weeks. The segments are widely spaced and the dorsal is hooded. Clones vary in depth of green colouration. The labellum has a strong red v-shaped feature on the frontal lobe, with an edge of light yellow.

In a rare anthocyanin-free form yellow replaces the red and this is one of the precursors of modern pure colour strains as developed by Mr Alvin Bryant.

Spikes are pendant and this has carried through to many of its hybrids. It has been influential in green and yellow breeding, and is also in the ancestry of most red cymbidiums. Its free flowering habit has been passed on to its progeny.

8. *C. tracyanum.* A Burmese species. Each arching raceme may have 15 to 20 large flowers with widely spaced, somewhat narrow, segments. Tepals may be lemon yellow or golden, with an overlay of purple-brown stripes and blotching. The labellum is large and blotched with purple-brown. The strong fragrance is rarely passed on to its hybrids after the first generation. The species flowers in early winter, but this is also recessive in its hybrids. Flowers last fairly well on the plant but go off quickly when removed. Hooding of the dorsal is passed to many of its hybrids. Genetically it is influential for colour.

9. *C.* X Ruby. The mystery natural hybrid because no clear explanation of its antecedants has yet emerged, although *C. giganteum* is believed to be one parent. It has been influential in the breeding lines for pinks and reds. The highly coloured stud plants in the grexes *C.* Rio Rita and *C.* Kangar carry its genes.

New generation seedlings arouse interest

C. Eastern Star 'Sunburst'

Parent plants are C. Sleeping Spring 'Sandon' x C. Wyanga 'Elanora'. The combination of shape, colour and size make this one of the most notable new clones exhibited in Melbourne during the 1982 season. >





C. Dawn of Hope 'Sandor Rose'

Parents are C. Sleeping Spring 'Sandon' and C. Sensation Vieux Rose'. This is the first flowering of a seedling. Sister clones are just as interesting for colour and shape. <

Photos: I. Whitcombe



Den. Ella V. Leaney x fleckeri

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Sarc. hartmannii 'Blue Knob'



Den. Bardo Rose

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Den. Eureka x Gr
Den. Andre
Den. Aussie Bon
Sarc. hartmannii 'B



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▲

Forgotten genus

Calanthe (unregistered grex) 'George' represents an historically important genus that no one now bothers to hybridise. However, most mixed collections have a plant or two. The genus contains both deciduous and evergreen species, but both have a marked annual growth cycle. This means a rest after flowering by withholding water, watering well while in active growth. It prefers a little warmth in winter.

Photo: Mr Bill Huddy

◄ **Tropical growing**

This display at the Seventh Australian Orchid Conference is indicative of the range of tropical orchids to be seen at the Eighth Orchid Conference in Townsville. Grand Champion *Phalaenopsis* Abendrot is the large dark pink at top centre. Other prize-winners include *Dendrobium* Debbie McFarlane and *D.* Autumn Lace. Exhibitor: Mr Kevin McFarlane.

Photo: Mr McFarlane

The deciduous *Calanthe*

BILL HUDDY

"Where have all the flowers gone?" So a well-known song goes. These words could be transcribed to:— "Where have all the Calanthes gone?" Once a very popular orchid at the early part of this century, judging by the number of hybrids registered.

These deciduous ground orchids have been relegated to the background, by showier and larger-flowered orchids and now are rarely seen on any nurseryman's lists.

A pity that these orchids have faded into obscurity as they are easy to grow in the tropical and sub-tropical regions. They give a wonderful display on long-arching stems, of pure white, white with coloured throats, pale pink, deep pink, red and bicolours. Some of these will have flowers for at least fourteen weeks as they slowly flower up the spike. Others will open all the blooms almost simultaneously for a mass display, which lasts five weeks or longer.

Due to a loss of interest, lost name-tags over the passing years, named plants of today are very suspect, and difficult to identify. No literature is available at present on all the species, let alone the many hybrids made sixty to over a hundred years ago.

These ground orchids produce large vigorous bulbs, given rich well-drained potting mixtures. Plenty of water and extra fertilizing during growing period is beneficial. Once the flowers are opening only occasional watering is required until end of flowering when all watering ceases. Allow pot to dry out completely, preferably out of the bush house. By this time most of the leaves will have dried and fallen, leaves will commence to dry and fall with beginning of flowering. When soil is dry, remove bulbs, trim off roots, any remaining leaves and old flower stalks. Preferable to treat with a fungicide and store in a light airy position. When new growth appears in six to eight weeks (could be longer period in cooler climate), plant into pots 150 mm or larger.

Pests that attack the leaves are Scale and Red Spider which can be controlled by the usual chemicals on the market today. The leaves that are marked by these pests will fall at flowering time and can be burnt, so very little damage to the plant is caused. The vigorous types multiply in number of bulbs. Over the years a problem arises — dispose of some or pot them all and by so doing increase by a further 75 per cent.

Calanthes that are available and named as follows:—

C. Bryan William Murray (*vestita* var. *rubro-occulata* x *williamsii*). Vigorous, bulbs large and thick at base. Flowers mainly white tepals with mauve lip — tepals sometimes with trace of mauve. Lip varies from light to dark. Five to six flowers open at once.

C. Veitchii (*rosea* x *vestita*). Vigorous, bulbs long slender, indented two-thirds of length, fragile at this spot. Flowers approximately 50 mm, pink with touch of white in throat. All flowers open quickly and remain on stem.

C. George (parents unknown). Bulb of medium length, deeply indented toward top of bulb. Flowers dark pink, fine white marking at top of throat.

C. vestita. Straight-sided chunky bulb. Flowers variable in colour from white to white with coloured throat, and flush pink. Found to be susceptible to rot in bulb, both back and new bulb, keep these well fungicided.

C. vestita var. *turnerii* — Cream tepals, mauve blotch in throat.

C. vestita var. *fournerii* — flowers open white, by the end of first week has a blush of pink all over — very round shape though not as big as previously mentioned.

Others that I have obtained but not yet flowered are *C.* Sedenii 'Bella', *C.* Baron Schroder and *C.* Rosea, *C. vestita* var. *rubro-occulata.* Also two apparently unregistered hybrids in *C.* Augustifolia and *C.* Cardioglossa. These latter could be garden names of clones from crosses made a hundred years ago.

On *Calanthe* hybridising

The genus *Calanthe* has an honoured place in hybridising due to two of its species, *C. furcata* and *C. masuca,* being the parents of the first recorded man-made orchid hybrid.

The historical cross was made by John Dominy at the Veitch nursery in 1853. Dominy was Veitch's foreman and he acted on a description of an orchid's sexual parts given to him by a local surgeon, Dr Harris.

This cross flowered in 1856 and was named *C.* Dominyi. In 1860 a cross of *C. rosea* and *C. vestita,* made by John Dominy, also flowered.

Up to 1899 29 *Calanthe* hybrids had been registered, and a further 53 by the end of 1946.

Since then the only hybridising has been the making of three crosses between *Calanthe* and *Phaius* to produce *Phaiocalanthe.*

Two of these crosses were from *Calanthe* Baron Schroederi (*regnieri* x *vestita*). *Calanthe regniera* is now considered a variety of *C. vestita.*

C. Baron Schroederi x *Phaius grandifolius* = *Phcal,* Stanny, and crossed with *Phaius* Gravesiae = *Phcal.* Dougie. Both these crosses were made in the late fifties by Herman Sweet of Massachusetts, USA.

In 1978 Andy Easton of Featherhill Exotic Plants registered a cross of *C.* Veitchii and *Phaius pictus* as *Phcal.* Mem. John Easton.

Surely the potential of the genus *Calanthe* has not been exhausted?

Liverpool's 1984 International Garden Festival

The story of the pioneer orchid growers of Liverpool, England, in the March issue of this magazine (page 29) produced some enquiries about the International Garden Festival.

This Festival is destined to be one of the great festivals of 1984. The scale is huge and the final cost will run to millions of pounds.

The Festival is for a six month period from April to October 1984, the English Spring and Summer. This means that anyone who goes to the Eleventh World Orchid Conference can elect to go on to England for the Festival. Of course those fortunate to be in England next year should plan to include the Festival in their itinerary.

Most of us won't be able to make it but there is bound to be a great deal about it in Australian papers, so it is an advantage to know something about it. The data hereunder is based on a press release of the Festival Committee.

Along the northern bank of the River Mersey, remarkable progress has already been made in transforming a 250-acre stretch of waterfront dereliction into the site for the International Garden Festival, Liverpool '84, the biggest event of its kind ever staged in Britain.

The landscaping, topsoiling and planting are geared to go "in tandem" with the crash reclamation programme which is well on target. A schedule which would normally take five years is being carried through in less than half the time. Much of this success is due to the setting up of a team of "trouble shooters" made up of specialists representing every skill used in the work, from the drainage engineer to the horticulturalist.

Already at least 20 countries have expressed interest in sponsoring a national garden in the theme gardens section of the Festival. All these countries are members of the Bureau International des Expositions, the body responsible for major world events which has conferred international category A.1. status on the Liverpool Festival, the first British event to win such coveted recognition and which will have Her Majesty the Queen as its Patron.

The theme gardens will be one of the main attractions and will include learning gardens, with experts giving advice, gardens for the disabled, novelty gardens such as the jam garden — these will have a special appeal for children — and gardens devoted to various species, providing acre upon acre of contrasting colours and innovative creations.

Centrepiece of the event will be the Festival Hall, an imposing building which has been described as "a modern Crystal Palace", at which there will be a wide ranging programme of horticultural exhibitions and events. Designed by Arup Associates of London, it will have a main roof of transparent polycarbonate panels and an amphitheatre style interior which gives an exhibition floor space of 7,500 square metres.

Alongside will be the arena for the staging of major sporting occasions and musical extravaganza and there will be an amphitheatre nearer the river for smaller presentations.

Derek Lovejoy and Partners of Manchester, who, like Arup Associates won their commission in a national competition, are designers of a landscaped area devoted to water features which will include lakes, cascades and a canal.

A 400 metre long, tiered esplanade with pub and restaurant, and sunken gardens will provide the opportunity to enjoy the river scene. Even more spectacular views will be possible from the 220 foot high observation tower with its revolving deck identical to that at the Amsterdam Floriade.

Other attractions will include the ultimate in garden centres, toddlers' play areas, tea shops, various stands and exhibitions on a range of subjects akin to horticulture, a gardeners' market, numerous retail outlets and a mini ideal home exhibition in which the houses will have individually designed interiors and gardens to match their character.

The Festival site will have its own rail link through the nearby St. Michaels station and is only a few miles from Liverpool Airport. It will be served by buses from the city centre and there will be over 10,000 parking places.

Apart from being full of interest as a city of two cathedrals, many fine buildings, including the magnificent St. George's Hall, and a recently opened Maritime Museum, Liverpool attracts tourists as the home of the Beatles.

The Liverpool Botanic Garden is famous for its orchid collection. All the famous British orchid nurseries will be represented at the Festival.

Liverpool is also geographically well placed as a centre for visiting the Lakes, North Wales and the Lancashire and Cheshire countryside. A local committee has been set up to help Festival visitors get the most out of their stay. During the Festival, the tall ships' race will finish at Liverpool, bringing a river spectacle which will be seen to advantage from the Festival site.

Further information on the Festival can be obtained from The Secretary, International Garden Festival '84, Merseyside Development Corporation, 4th Floor, Royal Liver Buildings, Liverpool, England L31jh.

Golden Jubilee Photographic Competition

As part of its 1984 Golden Jubilee celebrations the Orchid Society of NSW, in conjunction with *Australian Photography*, has organised this competition.

Progress prizes will be given at two monthly intervals, the first two months starting on 31st August, 1983. The Grand Prize is an Olympus single lens reflex camera.

The competition is restricted to colour slides because colour prints rarely reproduce well.

Non-growers may find subjects at any of the orchid shows listed in the June issue of *Australian Orchid Review*, or at any orchid nursery. If requested an orchid nursery will be pleased to co-operate because of the prospective publicity.

Rules and Conditions of Entry

1. The contest is in two parts:–
   A. For all photographers
   B. For members only of the Orchid Society of NSW or affiliated societies.

Anyone is eligible to enter in the appropriate section except the judges. The judges will be nominated by a recognised photography society. The contest opens on 1st July 1983 and closes on 15th July 1984 and entries must have been photographed during that period.

2. Entries in both sections should be in one of the following classes:–
   A. FOR ALL PHOTOGRAPHERS
      i. "Orchids Artistic" — An artistic photo including one or more orchids.
      ii. "Orchids in Situ" — One or more orchids growing naturally.
      iii. "Orchids on Show" — One or more orchids on exhibition.
   B. FOR SOCIETY MEMBERS ONLY
      i.
      ii. } as in A. subject to Rule 1.
      iii.

3. Colour slides only are eligible. Processing may be done by a photofinisher or by the entrant. Slides will be returned if stamped addressed envelope is provided.
4. No artwork or retouching is permitted.
5. To enter the contest mail slides to:–

   Golden Jubilee Photographic Competition
   C/- "Double U" Orchids,
   71 Wesley Street,
   ELANORA HEIGHTS NSW 2101.

On the mount of each slide, print your name and address clearly in ink, and state which section the slide is to be entered in. Pictures will be judged on photographic quality, their appeal, and the general interest they arouse. Any picture entered may be published or otherwise used by the Orchid Society of NSW.

6. At bi-monthly intervals, progressive judging will be held. The winner in each of the six categories will receive a prize consisting of a roll of Kodak 36 exposure colour slide film.

Any photographer may enter no more than 4 slides in any two month period (31 August, 31 October, 31 December, 29 February, 30 April, 30 June). A fee of 50 cents and an official entry form must accompany each entry, regardless of number of slides, to cover handling costs. Stamps are acceptable, no coins.

The best of bi-monthly winners will be published in "Australian Photography" and the competition final winners will be announced at the Golden Jubilee Banquet in August 1984 and published in "Australian Photography".

7. Entries to be on the official entry form as published in "Australian Photography" or available by writing to the Society.

NOTE: If you have difficulty in gaining access to orchids contact either "Double U" Orchids or the Society's Secretary:

Miss Betty Oldfield,
61 Mountford Avenue,
GUILDFORD NSW 2161.

8. a) The slides acknowledged as the best in each Section A and B will be awarded an Australian Photography plaque. The slides winning the remaining four classes will each receive a Kodak plaque.

b) The slide acknowledged to be the best overall entrant will receive the Golden Jubilee Award of an Olympus single lens reflex camera.

9. If you take a picture which you expect to enter in the contest and in which a person or persons appear, be sure to get their names and addresses and their permission.
10. The judges' decision will be final and no correspondence will be entered into.

Fine idea from Q.O.S.

The Queensland Museum is to move to the new Cultural Centre at South Brisbane. The Queensland Orchid Society has proposed to the Government that the old building be used as a Horticultural Hall. It is an ideal site for meetings and shows, permanent offices, library and reading room, and any other activities.

If the proposal succeeds this would mean the establishment of an institution unique in Australia and of great benefit to all gardeners and the general public. It would correspond to the facilities already available at the Royal Horticultural Society, London. The latter have helped make England one of the great gardening countries of the world.

The old museum building was originally designed as an Exhibition Hall and thus is eminently suitable for use as The Horticultural Hall.

Horticultural bodies and individuals who have not already done so are urged to indicate their support of this matter to the Queensland Government.

FIRST INTERNATIONAL ORCHID SHOW

Great organisation by Syd Monkhouse

Adelaide's First International Orchid Show took place on 16–21 March last. It was held in conjunction with a large horticultural exhibition known as Garden Week and incorporated displays from eleven different countries and nineteen international orchid companies. It was a huge success and some 45,000 people viewed the orchid exhibits.

This magazine received very interesting data on this show from Mr John Leeder of the South Coast Orchid Club of S.A. and this was the basis of a report in the June issue. This had to be short because editorial, and particularly colour, is organised well ahead.

The editorial work on the June issue had been completed when full details of this great show arrived on 31st May.

It is amazing that a world standard orchid show should be organised in March at a time when very few orchid plants are in flower around Adelaide.

What a challenge!

Mr Syd Monkhouse of Adelaide Orchids took it up and carried it through in his usual efficient style.

Here is Mr Monkhouse's own account of this challenge and its fulfilment.

SYD MONKHOUSE'S OWN ACCOUNT

Garden week is an annual display organised by the South Australian Association of Nurserymen and is staged in the early fall season. Orchid nurserymen here; find it of little use to participate because, as mainly cymbidium growers, they do not have flowers to display. The prospect of an orchid display feature for Garden Week meant creating a surge of public interest when enthusiasm in orchids was at its lowest ebb — this had to be a good thing.

The fact that the orchid show was a great success gives testimony to the magnificent response of our many international orchid growing friends who provided a mass of really top class blooms.

Malaysian Airlines and Panam helped make this show financially possible with their great assistance with freight internationally whilst TAA assisted materially with domestic freight into Adelaide.

A lovely 12-sided carousel-shaped stage was provided for the exhibit with our nine participating countries occupying one or more of the twelve compartments. The colourful flags of each country indicated the origin of each exhibit.

Of all displays USA provided the largest and most varied.

Exhibits in this section included miniature and standard cymbidiums provided by Santa Barbara Orchid Estate, Fred Stewart Orchids Inc, and Rudvallis Orchids — all of California. A truly outstanding display of paphiopedilums came from John Haynes Orchids of Distinction, and Fred Stewart Orchids Inc. A small but select collection of spikes of the Odontoglossum Alliance were sent by Duggers Hybrids, whilst the dominant exhibit of all in this section was the very colourful and high class collection of cattleyas, ascocendas, vandas, dendrobiums and other genera sent by Jones & Scully of Miami. This exhibit featured a logo of the Eleventh World Orchid Conference to be held in Miami, March '84.

Another huge and colourful exhibit of orchids was forwarded by the Federation of Malaya Orchid Society which is centred in Adelaide's sister city, Penang, Malaysia. Two members, Mr Hooi and Mr Tan represented their Society at the International Orchid Show. The huge response from Malaysia was overwhelming and the colour of their dendrobiums, renantheras, vandas etc, provided a really striking exhibit.

The Japan Orchid Growers Association supported our show magnificently with a class display of paphiopedilums, cymbidiums, vandas etc.

Vacherot & Lecoufle of France were represented by truly top class phalaenopses, cymbidiums, cattleyas and paphiopedilums and certainly we have come to expect top class always from this great orchid nursery.

The Dutch Orchid Circle through the agency of Meeuwisson Orchideen provided a typical top class exhibit of cymbidium orchids — a genus for which the Dutch growers are becoming famous.

T. Orchids of Bangkok, Thailand sent some lovely dendrobiums and vandaceous orchids but we were not able to coax them into sending any cut spikes of their "out of this world" vandas and ascocendas.

Green Orchids of Taiwan provided a box of some of the loveliest cattleya blooms that we had seen. Unfortunately these were a little delayed and arrived a day after the show had opened.

Maryland Orchids of Singapore were represented by a top class display of dendrobiums and vandaceous types.

The Townsville Orchid Society, hosts for the Australian Orchid Conference during late August this year, sent a most meritorious exhibit of many different genera including cattleyas, dendro-

biums, vandas, ascocendas etc. These were all top class blooms and made a fine display under the Australian flag.

Being a commercial orchid grower myself, I well know the almost insurmountable difficulties of preparing, labelling, packing and shipping an exhibit of orchids during the mad mid-flowering season time of the year. From experience I also know that, this is the time of year that we must do all we can to promote and sell our products.

Perhaps this 1st International Orchid Show could be the start of something needed in the orchid world. Certainly I am well aware of the many shows held in the Northern Hemisphere and the frequent international participation from nearby countries.

Apart from World Orchid Conference Shows I do not know of any other completely international displays of orchids.

Of course the cost of freight is a major detraction for international shipping of cut flower exhibits. I feel that it is unfair to expect exhibitors to bear this financial burden. If the show is large enough to recoup these expenses then surely this action must make participation much more attractive.

There is little doubt that properly publicised international participation is of tremendous interest both to orchid enthusiasts and the public in general. Any expense incurred by show directors in this matter will always be rewarded several times over in increased attendances and publicity.

I think that flower shows, garden exhibitions and allied functions should consider broadening their outlook and encourage international participation — we have tried it and find that it works.

Trying to co-ordinate shipments of flowers from many different countries to arrive at a given point almost simultaneously is no easy task and I can vouch for the fact that many frustrations and anxious moments were experienced. Ultimately all flowers, with the exception of the Taiwan exhibit, arrived just in time with the entire US collection being unpacked by 3.00 pm on 15th March with all exhibits supposed to be finished by 10.00 pm that same night.

We went over-time, and with adrenalin and sweat running freely (we were too busy for arguments), the small band of experienced orchid display arrangers finished their task around midnight.

At all times we had officers in attendance at the exhibit and quite a lot of their time was spent in reading labels for orchid enthusiasts and photographers.

"An Orchid Show when no orchids are flowering!" Sure — the challenge was met and the result absolutely enthralled the gardening public of South Australia. Our very grateful thanks to all who participated. Large numbers of Australians and possibly international enthusiasts will certainly come to our next International Orchid Show, with more time for advertising and planning. Just a minute — What am I doing talking about a "next International Orchid Show"? It has been said that "You don't have to be mad to grow orchids — but it certainly helps!"

RESULTS OF 1ST INTERNATIONAL ORCHID SHOW GARDEN WEEK 16–21 MARCH, ADELAIDE S.A.

Garden Week	Award
International Orchid of the Year	
Cattleya Princess Bells 'Betty's Bouquet' AM/AOS	Gold
Exhibitor: Jones & Scully, USA	
Paphiopedilum	
Paph. Great Pacific 'Granite Cliff'	Silver
Exhibitor: Hanes Orchids of Distinction, USA	
Paph. 'Darling Guinevere'	Bronze
Exhibitor: Vacherot & Lecoufle, France	
Phalaenopsis	
P. Danse	Silver
Exhibitor: Vacherot & Lecoufle, France	
Novelty Phalaenopsis	
Dtps. James Hall x *P.* Judy Fear	Silver
Exhibitor: Jones & Scully, USA	
Dendrobium	
D. Esther Zane Shigaki 'Butterfly' AM/AOS	Silver
Exhibitor: Jones & Scully, USA	
Vanda	
V. Phairot 'Mitsuko' SM/JOGA	Silver
Exhibitor: Kokubunji Orchid Nursery, Japan	
Ascocenda	
Asc. Peggie Hashimoto 'Orchidglade' AM/AOS	Silver
Exhibitor: Jones & Scully, USA	
Odontoglossum Alliance	
McLellanara Pagan Love Song 'Limbo Dancer' AM/AOS	Silver
Exhibitor: R. Dugger, USA	
Miscellaneous Orchid	
Rhyncocentrum Sagarik Gold	Silver
Exhibitor: Townsville Orchid Society, Australia	
Species Orchid	
Paph. fairrieanum 'Album'	Silver
Exhibitor: Hanes Orchids of Distinction, USA	
Cymbidium Orchid	
Lillian Stewart 'St. Cherie'	Silver
Exhibitor: Vacherot & Lecoufle, France	
Cymbidium Orchid Intermediate size	
Ivy Fung 'Radiance'	Silver
Exhibitor: Mukoyama Orchids, Japan	

AUSTRALIAN ORCHID FOUNDATION
Orchid Seed Bank

The Australian Orchid Seed Bank is short of seed. The production of species seed is one of the surest ways of ensuring the conservation of plants. One of the best ways too to help the Australian Orchid Foundation.

Only a little work is involved in pollinating a flower. Just as the pod is due to dehisce seed should be shaken out onto clean writing paper and enfolded. The pack must be labelled with the name of the species.

Advance bookings may be made for seed of *Disa uniflora* which will be distributed as it becomes available. *Disa* seed costs $2.50 per sample.

Subject to its availability, the following seed can be supplied by the Seed Bank. Cost is $1 for the first sample and 50 cents for each additional sample. Currency Australian dollars. Orders for seed should be sent to the Seed Bank Curator, Mr G.S. Banks, 183 Windsor Road, Northmead 2152 NSW Australia.

Reasonable supplies of all the species listed are available as at time of preparation of this list, however persons ordering are requested to give alternates in case supplies are depleted. Alternatively it can be left to the Curator to substitute – in many cases fresh seed not on the list could be available.

Australian species

Bulbophyllum elisae
Cymbidium canaliculatum and *C. suave*
Dendrobium aemulum, biggibum, dicuphum, dicuphum var. *album, discolor, kingianum, speciosum, mortii, teretifolium, gracilicaule, linguiforme, falcorostrum, tetragonum* and var. *giganteum, monophyllum, striolatum* and *ruppianum.*
Geodorum densiflorum
Phaius australis var. bernaysii
Oberonia muleriana

Exotic species

Aerides vandarum
Amesiella philippinense
Brassavola glauca
Cattleya bowringeana, guttata, and *amethystoglossa*
Coryanthes maculata
Dendrobium mooreanum, gouldii (type and Florida Island blue), *conanthum* (pure yellow), *helix* 'Talasea'.
Encyclia cordigera
Epidendrum radicans, nocturnum, stamfordianum
Laelia anceps and *gouldiana*
Phalaenopsis violacea
Schomburgkia tibicinis
Sobralia panamense
Spathoglottis plicata var. *alba*
Vandopsis parishii
Zygopetalum mackayii

Late Additions

Den. gouldii (7 different forms)
Bletilla striata
Encyclia tenuissima
Den. stratiotes
Paphiopedilum villosum, P. philippinense

New flask release

A new release of flasks of Odontoglossum hybrid seedlings in 300 and 500 ml flasks, having been replated twice, containing approx. 30 seedlings.

The seed parent is the first mentioned. The backgrounds of these quality parents have been carefully studied, making each, suitable for show bench display. No novelties are included in this list of offerings.

All proceeds from the sale of these flasks will go to the fund of the Australian Orchid Foundation, a voluntary organisation, whose objects are to assist promotion and support projects that will benefit our knowledge of orchids in their many sciences.

No 89 *Odm.* Torpesco 'First Snow' x *Oda.* Phryne 'F'
Expectancy: White or lilac background, with pastel markings.

No 91 *Odm. crispum* 'Lois' x *Vuyl.* Jewellene 'Margo'
Expectancy: A white flower with attractive red spots, some red splashes on the petals.

No 92* *Odtna.* Boussole X *Odm. crispum* 'Lois'
Expectancy: Large pure white, with Miltonia type labellum.

No 93* *Oda.* Red Rum 'Lois' x *Odm.* Moonee Ponds 'Oct'
Expectancy: Rich red and wine colours with purple edged petals, with good shape of *Odm.* Moonee Ponds.

No 95 *Odm.* Robesca 'C' X *Odm.* Pepe 'June'
Expectancy: Large white of good shape, red bold spotting.

No 97 *Oda.* Minel 'Bee' X *Oda.* Michie Donning 'G'
Expectancy: Bright red with darker marbled patterns.

No 99 (*Odm.* Stropheon x *Oda.* Franz Wichmann) X *Oda.* Matanda 'C'
Expectancy: Each of these parents are strong growers, the colours will be red and purple in many marbled patterns.

No 101* *Oda.* Trixero 'G' X *Oda.* Fremar 'Kerryn'
Expectancy: Red and wine colours, some will be marbled, others will be solid colour. It is hoped that the good labellums of the parents will be transmitted to the progeny.

No 104* *Oda.* Trixero 'G' X *Oda.* (Florispum x Drumbeat)
Expectancy: Good shape, bright red and rose colouring in beautiful marbled patterns.

These flasks are good value, and now is the time to purchase for early deflasking in the Spring.

These flasks became available in June 1983 from:
Belvedere Orchids
Frank Slattery
Hodgins Orchids
or the AOF, 107 Roberts St, Essendon.

The price is $25.00 a flask, except those marked * eg. No. 92* is $30.00. These are in limited supply only.

Orchid people

Colourful Andy Easton has become a legend in Californian orchid circles where the name Featherhill Orchids was a synonym for the unusual in quality species and hybrids.

Now Andy has felt the call of his birthland and returned to the sulphurous smells of Rotorua. We seem destined to see him in Australia quite often and local orchid societies would do well to snare him as a speaker. The Tasmanians have already done so for their State Conference at the end of September.

Those who don't know Andy, particularly anyone who has not read his articles in overseas journals, should turn to the article in this issue which is mainly a reprint of what the *Orchid Advocate* published last December.

•

Paul Gripp of Santa Barbara Orchids was in Australia during the second half of June and found time for a good look around some of the winter shows. On 18th June he addressed a large gathering of orchid folk at Cecil Park Orchids. Paul is famous for his many fine articles in orchid journals over the past twenty or so years.

•

Bill Wright of Victoria's Warringal OS, has made a unique orchid movie. He has recorded the plants of ten to fifteen years ago and indicated the direction that hybrid development is taking. He is now working on a similar progressive record for the period 1980-1990, and each ten year period for as long as he is able.

What a record for future hybridisers and growers. Bill Wright is a real visionary. Perhaps the Australian Orchid Foundation could set up a repository for such valuable contributions to orchid history.

•

Ron Heberle of Albany, famed for his knowledge of WA orchids and for outstanding orchid photography, at time of going to press was scheduled for a trip to Sydney. ANOS Sydney Group had him lined up for a talk, and he was scheduled to speak at the Native Orchid Society of SA on the way home. Melissa Robyn, about three kg, who has just entered his life, has made Ron a proud grand-daddy.

•

Earlier this year Harry and Lyn Verroen produced, as co-editors, a very interesting issue of *Phaius*, magazine of the Tropical Queensland Orchid Council. The journal has appeared irregularly for many years with valuable cultural information on tropical growing. A weakness is that various societies have produced it in turn and it has suffered from a lack of continuity. If Harry and Lyn can maintain the standard of their initial effort, and members of the societies support it, its future is assured. Congratulations Harry and Lyn.

•

Arthur Knight makes a very good job of editing the *Melbourne Eastern OS Bulletin*. He retired a couple of months back and wrote this little gem. Read it you "oldies" and take heart.

No doubt like many other members who are racing into their sixties, one wonders, what future, growing orchids has for us. Is a flask worthwhile? Should one make a crossing and sow the resulting seed, knowing that one may never see the result? Is it worthwhile changing growing techniques? Should a new glasshouse be built to house the ever expanding collection? Is indeed any of it worthwhile? It is about this time that one finds, due to retirement, extra time to do all these things. Yes, from my boyhood days come some lines, long forgotten, what relevance had they then? "How dull it is to pause, to make an end. To rust unburnished, not to shine in use. As tho' to breathe were life. Life piled on life were all too little and of one, to me, little remains: but every hour is saved." Maybe we are the lucky ones that have such a hobby as growing orchids, where the results are not immediately known and next year and the next and the next and so on, drawing one on with promise of results in the future. Yes, I will try another flask or two. I will attempt to try and successfully grow some new genera. I will build that new glasshouse. How about you? "Come, my friends, 'Tis not too late to seek a newer world' within the world of orchids."

Come to think of it, I feel so well I may even try sowing a bit of seed. "Some work of noble note, may yet be done." I wonder if Lord Alf Tennyson grew orchids? Yes, I retired last week. I think.

Congratulations Arthur. You'll soon be thinking of going back to work for a rest.

•

The many friends of Herb and Nell Foote will be pleased to hear that they are looking forward to some more bush orchiding this Spring. Herb is well-known for the work he did for the Orchid Society of WA over many years as secretary, judge, and president. Also for his founding of the WA Orchid Study and Conservation Group.

For many years Herb and Nell have enjoyed retirement on their two hectare property near Perth, aptly named "Foothills".

It is always more than a pleasure to receive a letter from Herb, the bonus being that his calligraphy is real art.

Return of the Native

Colourful Andy Easton has forsaken California and returned to his birthland. He returns not as a prodigal but as a prophet with the knack of predicting which two orchids will produce the most beautiful results.

Now that Andy is back in New Zealand it is certain we will see him often in Australia.

Last December Syd Collins wrote a special tribute to him in the *Orchid Advocate*. Below is all but the first paragraph. Our thanks to Syd and the *Advocate*.

Andy's sojourn in California brought tranquility, colour and excitement to the local orchid scene. His carefully reasoned and tactfully presented comments often cast a moderating influence on the sometimes strained atmosphere of the judging table.

At flower shows, his superbly grown species and hybrids always drew "oohs" and "ahs" from orchid enthusiasts and casual visitors alike. As an exhibitor, he excelled. With almost unprecedented regularity, flowers from his range at Featherhill Exotic Plants captured awards.

In conversation, Andy has few peers. Equally at home with expert or novice, he found particular pleasure in counselling the orchid grower who was just beginning. Here, his vast knowledge of many orchid genera enabled him to advise many perplexed hobbyists. A tribute to his generous nature was his unusual willingness to help his commercial competitors with cultural and hybridising problems. "They'd do the same thing to me", he often said.

Some of the most original orchid articles of recent years flowed from Andy's pen. Comfortable in Cape Town, at home in Hollywood, and welcome in Wellington, he travelled widely and often, sometimes seeming to have patterned his mode of living after the lifestyle of renowned traveller Eric Young of Jersey, whom he greatly admires. "What in the world are you doing in Santa Barbara?" friends often facetiously asked, surprised to see him at home. His frequent trips exposed Andy to the sight of more orchids than most of us will ever see, and with the polished prose of a Richard Peterson, whom he tried to emulate, he packed page after fact-filled page with recollections of his journeys.

But, it was at the lecturer's rostrum that Andy's light shone brightest. Public speaking was his metier, the platform his spiritual home. Drawing upon his great fund of knowledge, and speaking with enthusiasm and in that mellifluous voice for which he was so well known, he captivated audiences wherever he went. As a speaker, he effervesced, and behind his back acquaintances referred to him as "Bubbles".

But now he is going back. Back to the peaceful scenes of his childhood. Far from the bustling streets of Santa Barbara. Far from the maddening pace of metropolitan life.

Andy was something of a paradox. He seemed, on the surface, to be a nomad, a restless spirit, never happier than when heading for some far-off corner of the globe. But underneath, he longed for a more restful life. "I want to join my friends and relatives among the Maoris", he used to say, "and settle down near Rotorua, where the sharp, sweet scent of sulphur fills the air. The Maoris have a love of beauty and a strong affinity for nature. From them I hope to learn something of the inner beauty — the true aesthetics — of orchids. And I'll still be close to civilization," he mused, "only about 1500 miles from Australia. A self-taught Southern California authority got me interested in taxonomy, and I hope to study with some of the Australian experts, since they won't be far away."

So Andy Easton — dashing, debonair *bon vivant* — has returned to the pastoral life. And, he assures us, we can expect to hear him spouting off from his new home at Geyserland, extolling the beauty, tranquility and other homely virtues of the New Zealand countryside.

Catalogues Received

Mt. Beenak Nursery. The Winter/Spring 1983 Catalogue is well worthy of consideration by comparison shoppers. Clive and Agi Halls of Mt. Beenak have long been agents for Andy Easton's hybrids for which there is a world-wide demand. They are also agents for Everglades Orchids where Milton Carpenter has had marked success breeding temperature tolerant intergenerics between odontoglossums and oncidiums, also temperature tolerant cymbidiums. The agency is new and no Everglades crosses are listed yet. However it will pay to send for this catalogue and get on the mailing list.

Mt. Beenak Nursery, Lot 19, RSD 92, Hacketts Creek Road, Three Bridges, Vic 3797.

Nindethana Orchids. An essential catalogue for native growers and minicym lovers. Australian hybrids of second and third generation predominate. This is some of the most advanced native hybrid breeding in Australia. As agent for Keith Andrews Orchids, England, there is an appealing list of intermediate and miniature cymbidium crosses and mericlones. All orchids listed are cool growers.

Write for your catalogue to Nindethana Orchids, PO Box 94, Mitcham, Vic 3132.

•

I have always endeavoured to keep my mind free, so as to give up any hypothesis, however much beloved (and I cannot resist forming one on every subject) as soon as facts are shown to be opposed to it.

— Darwin, *Autobiography*

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Society wisdom

Being splendid ideas selected from Society Bulletins

Vuylstekeara Cambria 'Plush'

Dr Noel Grundon, writing in the Toowoomba O.S. Journal *Tan Bark*, has some interesting observations on this orchid:–

Vuylstekeara Cambria 'Plush' must be one of the most widespread of all orchids as thousands of mericlones must have been sold in the last few years. The deep red of the petals and sepals is relieved by the marbled red and white lip and white tips on the petals. On a large plant up to 20 of the 6 to 8 cm wide flowers are carried on a branching arching stem.

The genus *Vuylstekeara* was created to honour Mr C. Vuylsteke of Belgium, and combines the genera *Odontoglossum*, *Cochlioda*, and *Miltonia*. The abbreviation of *Vuylstekeara* is *Vuyl.* In 1931 Messrs Charlesworth & Co of England registered a cross between *Vuyl.* Rudra and *Odontoglossum* Clonius as *Vuyl.* Cambria. The species behind this cross are *Odm. crispum*, *Odm. harryanum*, *Odm. pescatorei*, *Miltonia vexillaria*, and *Cochlioda noesliana*.

Since the cultivar epithet 'Plush' is used by Keith Andrews Orchids of England as one of his clonal names we can assume that the plant *Vuyl.* Cambria 'Plush' was a seedling flowered by Keith Andrews, possibly from a remake of the cross.

Native hybrid seedlings

Maurie Black, editor of the *Warringal O.S. Bulletin*, had this to say on native hybrids in the June issue:

There are a lot of very good Australian native hybrids available these days. Only thing is, when you buy them, say from Nindethana Orchids (David Cannon) — and that's a good place to buy them, by the way — they are small plants in 5 cm tubes. Do not give them a rest period. For the first couple of years they move very slowly, so encourage them, even to bringing them in on the kitchen window sill, and give them very weak fertiliser every watering. After the second or third year they'll take off. You'll get a growth of 10 to 15 cm, then the following growth will most likely be a flowering growth up to 30 cm long. From there on you are rapidly on the way to having a specimen plant. Do get on to a few of these. You won't be sorry.

Do ants harm orchids?

That was a question asked at a meeting of the Townsville Orchid Society. The answer was that ants do not directly harm the plant but do bring aphids, etc which are harmful. Diazinon and Chlordane are poisons which can be used to combat ants. Mineral turps can be poured into the nest if it can be found. Do not use turps on plants.

Clean those pots

Ern Pauley, in the *Parramatta O.S. Newsletter*, advises an effective method of cleaning pots. It can be used for both plastic and terracotta. Ern uses two large containers, one with hot water and a cup of household bleach per five litres, the other filled with clean water. Pots are soaked in the bleach for ten minutes, then rinsed in the clean water. Be careful not to get the bleach mix on your hands by using tongs or a wire hook to fish the pots out.

This not only cleans the pots but sterilises them as well.

Townsville O.S. on cork growing

Townsville O.S. have a question session at meetings and anyone present may express an opinion on any cultural query. Thus collective wisdom prevails.

One question was on the suitability of cork for orchid growing. Opinion was that it depends on the genera and also local environment. Orchids on cork must be watered more. There is also a borer that lays its eggs in the cork and when the young hatch out they eat the orchid leaves.

Oncidiums and cork

In a lecture to the Morisset O.S. Mr Athol Bell made the point that oncidiums do not do well on cork. His experience is that they do better on tree-fern fibre.

Paphiopedilum Vanda M. Pearman

ROY K. NURTHEN

Paphiopedilum Vanda M. Pearman is possibly the finest pink primary hybrid yet made. The plant has attractive mottled green foliage and a glorious pale pink flower heavily spotted with red. The staminode is crimson, the pouch pale pink faintly spotted and recurved. The petal spread is 9 cm.

This hybrid was registered by S. Farnes of England in 1939 and has received numerous AM and HCC awards. It was given an FCC by the American Orchid Society in 1980. It has the ability to produce a plant and flower much larger than either parent, and it is common to find plants with a leaf spread in excess of 20 cm, and flowers up to 10 cm across. This is amazing if you

consider the size of the parents, *P. bellatulum* and *P. delenatii.* In addition this hybrid is easier to grow than either parent.

Unfortunately *P.* Vanda M. Pearman is almost totally sterile. Only one offspring has been registered: *P.* Mercedes Gallup (*P.* Vanda M. Pearman x *P. delenatii*) in 1978. It is believed that the *P.* Vanda M. Pearman which produced these particular seedlings was a chance tetraploid.

Cattleya potting

ALLEN STENLAKE

Based on an item in the Rockhampton O.S. Bulletin

After the first two seasons of using the following system for potting cattleyas it was very heartening to see such good results in my plants. All those knocked out of their pots showed a beautifully fresh and healthy root growth.

My potting material consists of three main mixtures:

(a) Charcoal 2 parts; 1 part American Fir bark; ½ part 4 mm gravel.
(b) Small grain styrene.
(c) Peat moss, 1 part sieved through 12 mm mesh; 2 parts perlite. Add to this mixture whatever fertilizer you may choose. I use a 75 mm pot of slow release blood and bone mixture which contains urea. This (c) mixture must be mixed and moistened at least a week before using.

Method

1. Place 12 mm to 25 mm of the (a) mixture, depending on the size of the pot, in the bottom of the pot, to prevent clogging of the drainage holes.
2. On top of this fill the pot about two-fifths full of the (b) mixture.
3. Cut off all dead or damaged roots and leave 4 to 5 cm of healthy roots. When I have trimmed the roots, before potting I usually soak the plant in a mixture of Physan.
4. Place the plant on top of the styrene and fill around the roots with the (c) mixture. Top off the pot with the (a) mixture.
5. Immerse the pot in Physan mixture to the top of the potting mixture, remove and firm down the potting medium around the plant roots.

WOOF WOOF
or "What to do with your bark"

At our last February meeting among the bits and pieces we all talked about, Jim Cummings mentioned he always does his potting on a sieve so that bark dust is removed. This of course is good advice but there is a refinement that I've been using for the rather expensive American fir bark.

Most bark including the American bark has larger range grain size in the bag (from dust to 25 mm) than is ideal for many orchids. The following is one economical solution to the problem.

You need a round sieve with 10 mm (0.4 inch) mesh, a piece of that plastic shade mesh that Nylex makes (about 2 mm holes) and some fencing wire slightly longer than the circumference of the sieve. Cut the plastic mesh into a round piece to neatly fit inside the sieve.

After sieving with the 10 mm mesh, bag the oversize and place the plastic mesh inside the sieve to be held in place with the fencing wire which will spring against the side of the sieve.

Now sieve the undersize from the first pass.

After a good shaking most of the dust will have passed through and you will notice the oversize will have sorted out to a certain extent with the large grains on top and the fines below. Remove about the top quarter by hand and bag. Shake again, remove top quarter and repeat two or three times.

Dust will have continued to pass through and you will now have rather fine bark in the sieve. Bag this separately.

You now have three grades of bark about the following specifications:

+10 mm — ¾ to ⅞ of a bag.
5 to 10 mm — ½ a bag.
2 to 5 mm — ⅛ of a bag.

Note that this adds up to more than a bag because the finer bark once occupied the pore spaces between the large pieces.

The largest size is ideal for cattleyas, ascocentrum, sarcochilus and larger plants of epiphytes generally. The second size is for paphiopedilum, phragmipedium, lycaste, odontoglossum alliance and small plants generally. The finest size is good for the babies in 50 mm pots and the like.

G. H. Fulcher in Manly-Warringah OS Bulletin.

Anyone know Mr Walters?

Sydney Orchid Society has received an SOS from Mrs Viola Muskett, a long time member of two Vancouver orchid societies, and have passed it on to AOR.

Five years ago Mr Walters, then of Ganges, Salt Spring Island, B.C. when in Sydney was given plants of a cymbidium and a stanhopia. Divisions of these were given to Mrs Muskett. Unfortunately Mr Walters had mislaid the names of these plants. Also he has moved to eastern Canada.

Mrs Muskett would dearly like to know the names of these plants, particularly the cymbidium. Its spike was over a metre and a quarter long with eighteen beautiful 15 cm wide green flowers.

Mrs Muskett would be grateful if the Sydney friend of Mr Walters, or anyone who knows him, could supply the names of these plants. Her address is Sea Spray Boulevarde, R R *2, Suite 1-2, Nanaimo, B.C., Canada V9R 5K2.

Some Autumn and Winter Shows

Q.O.S. Autumn Festival

FRANK OELKERS

The Festival was at the Kelvin Grove High School. "Stewie" Heyden, a grower of not many years, showed he has mastered the art of good growing and flowering of cattleyas, vandas, and the somewhat fickle and demanding phalaenopsis. "Stewie's" conquests were Grand Champion, Champion Species, six Firsts, and several minor placings.

The Festival Champion was *Vandanthe* South East Beauty (Eisenhower x Thananchai). It carried seventeen award quality blooms on a sturdy erect spike, and was certainly bred in the purple, with several infusions of *Euanthe sanderiana* ensuring good shape and richness of colour.

Cattleya Portia 'Cannazaro', tabled by L. Napper, was Reserve Champion. This shapely cattleya was also Champion Cattleya and thus recipient of the Kevin Watford Memorial Cup. The late Kevin Watford was a Q.O.S. judge and fine cattleya grower.

Mr and Mrs Horsfall's *C.* Portia 'Baroness', a blue form, was Champion Specimen. This show stopper carried thirteen spikes with seven or eight flowers to each. This fine effort earnt a Cultural Certificate.

Pine Rivers Orchid Society won the Affiliated Societies Display with a colourful and well balanced arrangement. I noticed several classy phalaenanthe type dendrobiums in this display.

One of the displays, aptly captioned "Vintage Years" actually bore real grapes and a king-sized bottle of — I think — Spumante. The bottle remained intact, but the grapes — too much of a temptation — were devoured and not by slugs or chewy things.

West Brisbane was second in the Affiliated Societies' Displays, with North Albert O.S. third, West Moreton O.S. fourth. The Native Orchid Society, handicapped by a shortage of flowers at this season, was fifth. North Brisbane was first in the small display section.

The Cooktown Orchid, *Dendrobium bigibbum*, was well represented and it looks as if our State Floral Emblem is back again in fashion.

The individual classes carried some very fine orchids. Notable was a group display by Mr J. Buchanan.

NSW Winter Show

For a full shopping week Westfield Burwood Shopping Complex shone with orchids. This year there seemed to be few cymbidiums and more paphiopedilums.

President Wal Upton undertook a practical research and found that the nine large and four small displays, a neat family display, and paphiopedilum groups totalled 1181 orchids. Of these 295 were cymbidiums, all types, 404 paphiopedilums, and 147 catttleyas, plus 335 other genera. The whole added up to a most impressive scene.

Grand Champion was *Paphiopedilum* Kay Rinaman grown by paph expert Mr Stan Condon who also won the class for Group of Four Paphiopedilums.

Mr P. Crutchley's *P.* Orchilla 'Chilton' was Reserve Champion.

Champion Other Orchid went to a floriferous and aptly named *Oncidium* Golden Cloud 'Susan' shown by master grower Mr W. Hughes. Another fine grower Mr Bert Schwartz gained the Reserve Other Orchid Championship with his *Blc.* Mem. Crispin Rosales 'Ruen Yuan'.

Native Champion went to Mr P. Collin's *Dendrobium* Star of Gold, notable for fine upright spikes and golden flowers. This hybrid is a cross between *D. falcorostrum* and *D. speciosum*.

Best Novice was a well-grown *Cymbidium* Sarah Jean 'Jennifer' owned by Mr E. Heaune.

A large group of *Paphiopedilum fairrieanum* clones became the focal point of the Berowra Orchid Society exhibit and won for Mrs B. Rhodes the A.O.C. prize for Most Pre-eminent Entry.

Affiliated Society Displays followed the usual pattern of Parramatta being narrowly defeated by North Shore. Bankstown OS did extremely well with a meritorious third, with Sutherland and Eastwood in fourth and fifth places. Very attractive displays were presented by Berowra, Ku-ring-gai, Western Suburbs, and Sydney societies.

In the small but no less attractive displays, first prize went to Five Dock, other prizes to St. George, Cumberland, and Lidcombe Hospital societies.

Sunshine Coast Autumn Show

The Sunshine Coast O.S. of Caloundra, Queensland, hosted five surrounding societies at its Autumn Show in the Caloundra Civic Cultural Centre last April. The five societies were Gympie, North Coast, Maroochydore, Glasshouse Country, and Caboolture.

Shire Chairman, Mr Jack Beausang, declared it the best Autumn Show ever.

Cattleyas and dendrobiums predominated, and the foliage section was a delight.

Grand and Reserve Champions were both exhibited by Mr and Mrs O. Granger. The Grand Champion was *Blc.* South Ghyll, and the Reserve a fine *Dendrobium* Hickham Deb.

Best Specimen Orchid was *Dendrobium* 'Three Star' exhibited by Mr D. Matters. Although this name is listed in the ANOS Checklist of Australian hybrids, where it is indicated to be a cross between *D. superbiens* and *D. johannis* there is no record of it being registered with RHS. Perhaps a reader can tell us more about this cross.

Mornington Peninsula Winter Show

Mornington Peninsula Orchid Society members were thrilled with their Winter Show. Champion was *Oncidium* Palolo 'Kay' with its array of flowers, each with a beautiful yellow skirt and deep brown spotted dorsal. It was superbly well-grown by Mr Mark Blair.

Plants that stood out were the specimen size *Cymbidium* Alice Williams 'Camden', a lovely miniature, owned by W. and M. Johnson and judged Champion Cymbidium. Among the paphiopedilums

that impressed were the two clones of *P.* Julia Mash, 'Banksia', first and second in the Yellow or Green Class and owned by, first Mr J. Borschmann, and second Mr L. Mercer. Species paph winner was a delightful *P. bellatulum* owned by B. and D. Shannon. An *Ascocenda* cross from *Vanda* Wongse x *A.* Meda Arnold, shown by J. and B. Brighton, was nicely grown with a spike of magnificent deep pink flowers. Novice Mr R. Lee presented a nice *Cymbidium* Golden Goblet.

The Show Marshal and his assistants demonstrated a great job of organising.

Species Show Winner

Queensland's Orchid Species Society held an Autumn Mini Show at which *Dendrochilum cobbianum* was judged the most outstanding orchid. The champion had been cultured by Dr J.L. Perrett.

During the show the president, Mr H. Young, demonstrated the deflasking of seedlings.

Species cultural notes. To celebrate the Tenth Anniversary of the Orchid Species Society of Queensland a booklet of *Species Cultural Notes* has been published by members. Descriptions of the best growing conditions for many species are based on the practical experience of the writers. Copies are $2.00 posted. Send to Mrs P.M. Smith, Hon. Secretary, PO Box 485, Toowong, QLD 4066.

Aspley O.S. Show aids Charity

The May Autumn Show of this Society resulted in a sizeable donation for the Aspley Opportunity School. Local traders donated trophies. In spite of the rain in days before the show members created a spectacular display.

Champion of the show was a particularly fine *Oncidium* Hamilton Gold. This cross has proved very floriferous and colourful. One parent is *O. varicosum* var. *rogersii* 'Harry Jensen' and the other *O.* Phyllis Wells. The former is noted for size, the latter a scion of *O.* Kuron x *O.* Gardneri. Mr G. Rath was the grower.

Another oncidium, *O.* Nona owned by G. and M. Thomson, was Reserve Champion.

Champion Species, belonging to D. and B. Randle, was the purple flushed form of *Paphiopedilum primilinum*, a species first recorded in 1973. This form is frequently referred to as *Paphiopedilum primilinum* var. *purpurascens.*

The Champion Specimen was a surprise to those who did not know that *Oberonia palmicola* can build up into a really big plant with many flower spikes. The flowers are tiny but there could be over a hundred on one spike. Grown by M. and J. Smith. Champion Native was a well grown *Dendrobium biggibum* 'Album'.

More Show Dates

The following show details were received too late for inclusion in the June issue. In addition there are some corrections to the June list.

QUEENSLAND

Bundaberg OS. No winter or spring show. Autumn show to be held in April 1984. Meets 3rd Thursday, Uniting Church Hall, Skyring St, East Bundaberg. Sec: Mr A. Bennett, PO Box 1173, Bundaberg. Phone (071) 72 1752.

Gladstone OS. SPRING. Kin Kora Hall 7 & 8/10. Sec: M/s Neva Merritt, PO Box 867, Gladstone 4680. Phone 78 2408. Meets 1st Wed. Bowls Club Hall, Ferris St.

Gympie OS. AUTUMN SHOW 1984. Fri. 27/4 9am-9pm; Sat. 28/4 9am-4pm. Sec: Mrs A. Maher, PO Box 54, Gympie 4570. Phone (071) 82 3861. Meets last Tues. T.A.F.E. Centre, Gympie.

Gold Coast OS. SPRING. Orchid Pavilion, Owen Park Showground. Fri 26/8 & Sat 27/8 9am-9pm. Sun 28/8 9am-6pm. Sec: Mr K. Jones, 143 Acanthus Ave, Burleigh Waters 4220. Phone (075) 35 5530. Meets 2nd Sun at 1.30pm, S.C.W.O. Hall, Burleigh Heads.

Logan & Albert OS. SPRING. The 2nd Spring Show will be held at Beaudesert Fri 16 & Sat 17/9. Sec: Mrs N. Goeldner, PO Box 235, Beaudesert 4285.

Mt. Isa OS. No shows. Sec: Mrs S. Sanderson, PO Box 702, Mt. Isa 4825. Meets last Fri, Playgroup Centre, Daphne St.

North Queensland OS. Fun in the Sun Show. Cairns Table Tennis Hall, Sheridan St, Cairns. Sat 8 & Sun 9/10 9am-5pm. Meets 2nd Mon, Education Centre, Morehead St, Bungalow. Sec: Mrs Fay Swenson, c/o Nevin's Nursery, 413 Mulgrave Rd, Cairns 4870. Phone 54 1201.

Redlands OS. SPRING. CWA Hall, Shore St, Cleveland. Fri 23/9 10am-5pm, Sat 24/9 9am-5pm, Sun 25/9 9am-4.30pm. Sec: M/s D. Skiggs, 3 Maud St, Thorneside 4158. Meets 3rd Mon, CWA Hall, Cleveland.

Sunshine Coast OS. SPRING. Gallery, Civic Centre, Minchinton St, Caloundra. Fri 30/9, Sat 1/10, both 9am-8pm. Sec: Miss A. Hall, PO Box 279, Caloundra 4551. Phone 92 1401. Meets 3rd Fri, C.C.S.A. Hall, Nutley St, Caloundra.

Warwick OS. SPRING. Venue, contact secretary Mr P. Gander, PO Box 509, Warwick 4370. Fri 9/9 & Sat 10/9, shop hours. Meets 2nd Mon, Scout Hall, Dragon St. Phone (Treasurer) 61 3860.

West Brisbane OS. No shows. Sec: M/s M. Keogh, 56 Ballata St, The Gap 4061. Phone 38 5178. Meets 4th Wed, Uniting Church Hall, cnr Simpsons Rd and Leworthy St, Bardon.

VICTORIA

Maribyrnong OS. SPRING. Old Shire Hall, cnr Kennedy St and Calder Hwy, Keilor. Sat 17/9 9am-7pm & Sun 18/9 10am-6.30pm. Sec: Mr G. Campbell, Kyle Taylors Rd, Mt. Macedon. Phone (054) 26 2096. Meets 2nd Tues, Old Shire Hall, Keilor.

SOUTH AUSTRALIA

Port Augusta Orchid Club. SPRING. Cooinda Hall. For dates contact secretary, Mrs Betty Vile, PO Box 1752, Port Augusta 5700. Phone (086) 42 2021.

TASMANIA

Orchid Society of North West Tasmania. SPRING. Burnie Civic Centre. Thurs 13/10 2pm-9pm, Fri & Sat 14 & 15/10 9am-9pm, Sun 16/10 10am-4pm. Sec: Mrs E. O'Halloran, Municipal Caravan Park, East Wynyard. Phone (004) 42 3730. Meets 1st Wed, Hellyer College, Mooreville Rd, Burnie.

NEW SOUTH WALES

Cumberland OS. Spring Show date alteration. Due to the original show date clashing with Parramatta OS this society has changed its show date from the end of August to Wed, 5/10 to Sat 8/10. Venue is Castle Towers Shopping Centre, cnr Castle St and Old Castle Hill Rd. Open in shop hours. Set up on Tues night.

Sydney OS. Phone no. is (02) 759 6166. Other details as June issue.

Tweed OS. Change of dates and venue. SPRING. Now on 24/9 and 25/9 (Sat & Sun) at RSL Hall, Kingscliff St, Kingscliff. 1st day 9am-7pm, 2nd 9am-4pm. Sec: Mr Don Capner, Kiel Vale, via Murwillumbah.

Wollongong Native Orchid Society. SPRING. Regional Shopping Centre, Warrawong. Thurs 22/9 to Sat 24/9 in shop hours. Sec: Mrs E. Beileiter, 19 London St, Berkeley 2506.

VALE HARRY BOND

Newcastle's best known and widely respected orchid personality is dead.

Harry joined the Newcastle Orchid Society in January 1952; served on the committee for three years; was Vice-President for three years, then President for ten years. He became a Life Member in 1966.

Harry Bond turned from marine engineering and speedboat racing to orchids in 1945. In 1950 he made the first export of cymbidium flowers from the Newcastle area, in fact he was one of the pioneers of the industry in Australia. His nursery grew to the point where he was supplying plants to hobby growers and buying back the flowers for export.

Meanwhile he had become the first President of the Maitland and Coalfields Orchid Society, and co-founder of the Belmont Orchid Society and its Vice-President for 18 years. He chaired meetings inaugurating the Dungog, Gloucester, Cooranbong, and Westlakes Societies. To cap these efforts he served 22 years as President of the Boolaroo Orchid Society. The NSW Judging Panel appointed him the first judge outside the metropolitan area. That was 25 years ago and in that time he rarely missed a judges' meeting.

Harry was noted for his help to beginners, many of whom received their first orchids as a gift from him. For 12 years Harry Bond was Chairman of the Combined Newcastle Orchid Societies Committee. Eight societies made him a Life Member.

The sympathy of all who knew him reaches out to his family.

Boolaroo Orchid Society has raised funds for a Harry Bond Memorial Trophy to be held by the most successful novice competitor at the annual spring show. To encourage novices is what Harry would have wanted.

EIGHTH TASMANIAN CONFERENCE

Mainlanders dashing over to Tassie for the invigorating spring air of the isle should plan to include this Conference in their itinerary. It runs from September 30 to October 2 and socially it's scintillating. The lecture programme matches the standard of a major conference, the speakers being Andy Easton of New Zealand, late of USA; David Cannon from Nindethana; Robert Giles of Wondabah; Dean Johnson from SA; and Chris Nicholas, one of Tassie's top growers.

Registration will be last minute but the hospitable islanders will squeeze you in. Cost $15 single, $25 double, $10 for dinner.

To register send your money to The Secretary, Devonport Orchid Society, PO Box 805, Devonport 7310.

TOP GROWER'S CYMBIDIUM MIX

John Mata is one of Sydney's finest cymbidium growers. His plants grace many of Sydney's spring shows where he invariably wins champion cymbidium or even show grand champion. In the *Parramatta OS News* he details his cymbidium compost mix.

To 1¼ buckets of pine bark add one bucket of German peat, half bucket wood shavings OR rice hulls, and one bucket of peanut shells. Mix a bulk supply in these proportions and store for six to eight months before using.



The late Mr Russell Martin snapped with Mrs Martin while in Singapore on the way to the Ninth World Orchid Conference.

The tribute below is by his friend Bob Hodgins on behalf of us all.

Russell's modesty was such that it will come as a surprise to nearly all his friends in the chid world to learn that he was a holder of the D.F.C.

Vale Herbert Russell Martin, D.F.C.

Russ first became interested in orchids during the war years whilst serving with the RAAF in England. His association with the late Sydney Rothwell prompted his involvement when he returned home. He admired this gentleman as an orchid grower extraordinaire and spent much time with him when on leave.

After the war Russ enrolled for a rehabilitation course at Burnley School of Horticulture, on completion he opened a general nursery eventually acquiring a few orchids.

Many years later he became associated with McBeans and orchids became a full time business, more recently although he retained the name, his association with the English firm was terminated and his own family became more involved.

He joined the Victorian Orchid Club in 1947, achieved the ultimate, became President in 1972, was Registrar of the judging panel, later Registrar General and Vice President of the Australian Orchid Council.

His involvement and personal contribution to the Victorian Orchid Club was recognised when he was made a Life Member in 1973.

Russ has taken with him a vast knowledge of orchids much of which he willingly shared with others. His determination and fight against overwhelming odds for four years is an inspiration to all who knew him.

Eighth Orchid Conference

For the first time a full-scale Australian Orchid Conference is being held outside a capital city.

It will be a most interesting conference for those attending. However its benefits will extend back to growers in every state because of the knowledge registrants will carry back.

The conference committee have been daring in their initiatives to attract some very famous and experienced overseas speakers. Nearly all the local speakers are well-known in other orchid-growing countries. All have new concepts to communicate. It is certain that the ideas of these innovative people will permeate back to wherever orchids are grown in this country.

Some speakers are at the forefront of new hybridising ventures. They include Frank Shride of the Beall Company, Washington State, USA, on cattleyas; Terry Admans of England's Wyld Court Orchids, on lycastes, and John Miller of California, on phalaenopsis. Local breeders Wal Upton and Kev McFarlane are set to show that Australia is ahead of the world in some fields of orchidology.

Interest in Papua New Guinea has been heightened by the publication of Schlechter in English so the talk by the Rev. Canon N. Cruttwell is particularly timely. Geoff Stocker, who maintains a fantastic orchid collection on the Atherton Tableland which includes thousands of New Guinea plants, will follow Canon Cruttwell and give points on their culture.

Papua New Guinea is the centre of distribution for the *Dendrobium* section Ceratobium and Dr Phillip Cribb, one of the world's leading taxonomists, is to discuss these orchids. He has been researching this section and will have interesting new facts to reveal. With such speakers PNG orchids will be effectively covered for the first time at any orchid conference.

Professor Rapee Sagarik of Thailand and "Doc" Charles of California are stimulating speakers, the former speaks on conservation, the latter on phalaenopsis.

The social side of a conference makes attendance worthwhile. If you read this before the conference and decide to go the Secretary, Ted Boon, can fit you in. Townsville is full of motels and hotels and accommodation is available at the university for only $28.00 a day with meals included. Just contact Ted at the Eighth Australian Orchid Conference, PO Box 1129, Townsville, Qld 4810.

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Ray Robinson is president of Townsville Orchid Society, host society for the Eighth Australian Orchid Conference. Ray is one of those quiet types who gets things done. He and conference chairman, Frank Tooth and conference secretary Ted Boon, have been a good team. With their wonderful team of helpers it is certain the Conference will be remembered as one of the best ever held.

NEW MEETING PLACE FOR TOOWOOMBA O.S.

The Toowoomba Orchid Society now meets in the Red Cross Hall, Herries Street. There is a lane and car park behind the hall. The Society meets on the fourth Friday of every month, except September and December, at 7.30 pm. The Secretary is Mrs B. Simpson, 445 Wentworth Street, Toowoomba. Phone 35 1948.

KNOCK THOSE SNAILS

Writing in the Newcastle OS Bulletin Hughie Webb has this sound advice on snails: For some time members have been having troubles with small snails called 'Garlic Snails'. From whence this name derives I am not sure but it is most annoying when the green-growing tips of cattleyas in particular are nipped in the night by tiny snails which hide in the pots. A new product has emerged under the trade name of Mesurol which is sprayed on top of the compost twice, two weeks apart, and it is evident that the snails don't like it because it kills them. Green root tips everywhere. In addition a sprinkling of blue Defender pellets on the ground keeps the large snails and slugs at bay. Happiness is going to bed knowing that snails and slugs on the prowl are sliding on dangerous ground.

Coming Events

11th World Orchid Conference. Miami, Florida. March 5 to 12, 1984. Enquiries: PO Box 59-5150, Miami, Florida 33159.

8th Australian Orchid Conference. August 28 to September 4, 1983. Townsville, Queensland. Details elsewhere in this issue.

9th Australian Orchid Conference. Melbourne, September 1984. Host Society: Victorian Orchid Club. Enquiries: Mrs I. Hutchins, 37 Elliot Street, Mordialloc, Vic 3185.

Orchids Australia '84. 10th Australian Orchid Conference and International Orchid Show. Celebrating South Australia's 150th Jubilee. Your host the Orchid Club of SA.

O.S. of NSW Orchid Workshop. Berowra Community Hall, Sunday 9th October, 1984. Fee $12.00 covers lunch, proceedings, etc.

British Orchid Congress 1983. October 29-30. City of Norwich, hosted by the Orchid Society of East Anglia. For details contact Mr A.J. Towler, 62 Queens Road, Wisbich, Cambs, England.

RHS International Centenary Orchid Conference. RHS Halls, Westminster, London, March 21-24, 1985. Details from Royal Horticultural Society, PO Box 313, Vincent Square, London, SWP 2PE, England. Associated with 7th European Orchid Conference.

German Orchid Congress and Show. September 30 to October 2, 1983 at Neu-Ulm.

France. Show at the Parc de Vincennes, Paris. March 1984.

14th Swiss Orchid Show. November 17 to 21, 1983 at Berne.

Santa Barbara International Orchid Show. Earl Warren Showgrounds Exhibition Building, March 30 and 31, April 1, 1984.

The Orchidophile

The Sydney Group of ANOS produce a very readable bulletin under the above title. It is crammed with tips on growing native orchids. The group meets on the third Friday each month at the Ryde School of Horticulture, Parkes Street, West Ryde. Secretary is Mr M. Harrison, Lot 2 Howes Road, via Wilberforce, NSW 2756. Phone (045) 76 3290.

These are your main orchid organisations

Each can help you increase the pleasures of growing orchids

There are nearly 150 orchid societies in Australia. They are all well organised to help members and newcomers enjoy orchid growing. Most meet monthly.

An active social programme ensures opportunities to meet interesting people, particularly through inter-society visits, Regional, State and Australian Conferences. The ultimate is a trip to a World Orchid Conference held every three years.

The Australian Orchid Council is the co-ordinating body for the six State bodies. It arranges an Australian Orchid Conference every two years, standardises judging practice, and is a forum for discussion on general policies. The council maintains a slide programme library for affiliated societies.

Australian Orchid Council

President: Mr C. Hill, Queensland Orchid Society.
Vice-President: Mr A. Bell, Orchid Society of NSW.
Vice-President: Mr D. Gallagher, Orchid Club of South Australia.
Secretary: Mrs T. Tinney, 83 Hebe Street, Bardon, Queensland 4066.
Treasurer: Mr J. Williamson, 25 Ayr Street, Morningside, Queensland 4170.
Registrar-General: Mr L. Peaty, 43 Annangrove Road, Kenthurst, NSW 2154.

Orchid Society of NSW

Meets last Monday of month at Henley Bowling Club, Crown Street, Henley (on Ryde bus route) at 8 pm.
Patron: His Excellency Air Marshal Sir James Rowland, KBE, DFC, AFC.
President: Mr W. Upton, 71 Westley Street, Elanora Heights 2101. Phone 913 9438.
Secretary: Miss Betty Oldfield, 61 Mountford Avenue, Guildford 2161.
Treasurer: Mr J. Nicholl, 2 Gibson Road, Mosman 2088. Phone 481 4205.

Orchid Club of South Australia

Meets at the Australian Mineral Foundation Building, Conyngham Street, Glenside, first Thursday in month at 8 pm.
Patron: His Excellency Lieutenant General Sir Donald Dunstan, KBE, CB.
President: Mr M. Strout. Phone 79 5303.
Secretary: Mr D. J. Harris, C/- GPO Box 730, Adelaide 5001. Phone 481 4205.
Treasurer: Mr J. P. Lewis. Box number above. Phone 297 2581.

Queensland Orchid Society

Meets second Monday in the Senior Citizens' Centre, McLachlan Street, Fortitude Valley, Brisbane at 8 pm.
Patron: His Excellency Sir James Ramsey, CBE, DSC.
President: Mr Barry Paget. Phone 390 1803.
Secretary/Treasurer: Mrs Noela Parsons, C/- GPO Box 2002, Brisbane 4001. Phone 398 6031.

The Victorian Orchid Club

Meets third Monday in month, St John's Church of England Hall, Toorak Road, Toorak at 8 pm.
President: Mr R. Hodgins, PO Box 108, Frankston 3199. Phone 787 5554.
Secretary: Mrs I. Hutchins, 37 Elliot St, Mordialloc 3195. Phone 580 4917.
Treasurer: Miss M. Ryan, 85 Holden Street, Fitzroy North 3068. Phone 481 4205.

Orchid Society of Western Australia

Meets fourth Friday in month, Institute of Engineers' Hall, 712 Murray Street, West Perth at 8 pm.
Patron: Sir Crawford Nalder, KB.
President: Mr I. Duncan, 5 Salen Court, Ardross 6153. Phone 364 5439.
Secretary: Mr J. Foley, 39 Stirk Street, Alfred Cove 6154. Phone 330 2132.
Treasurer: Mrs K. Baylis, 18 Wheyland Street, Willagee 6156. Phone 337 6210.

Tasmanian Orchid Society

Meets fourth Monday of month at Legacy House, 159 Macquarie Street, Hobart.
President: Mrs P. Nicholas, 7 Kelvin Avenue, Moonah 7009.
Secretary: Mr J. F. Smith, 11 Warren Court, Howrah 7018.
Treasurer: Mr C. Nicholas, 7 Kelvin Avenue, Moonah 7009. Phone 28 4478.

Australian Orchid Foundation

Director: Mr Gerald McCraith, 107 Roberts Street, Essendon, Victoria 3040.
Chairman Research Committee: Mr L. J. Lawler, C/- Department of Biochemistry, University of Sydney, NSW 2006.
Seed Bank Curator: Mr G. S. Banks, 183 Windsor Road, Northmead, NSW 2152.

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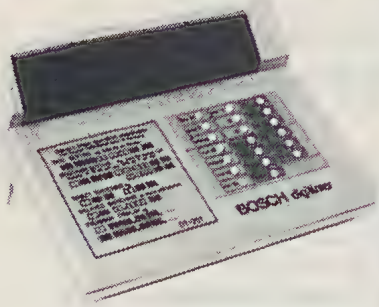
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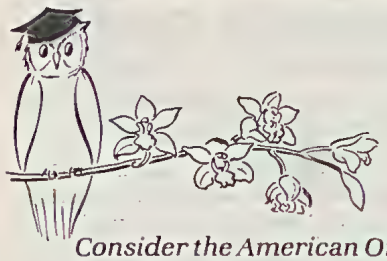
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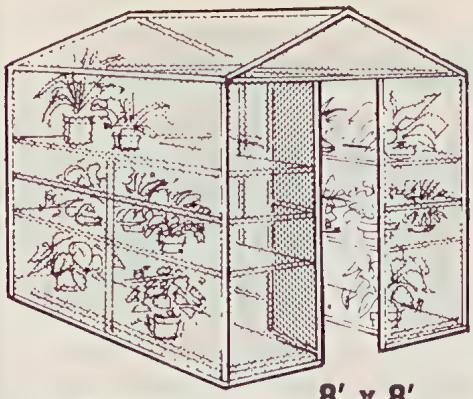
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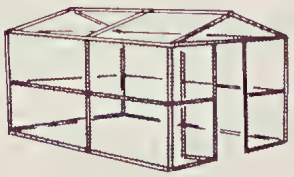


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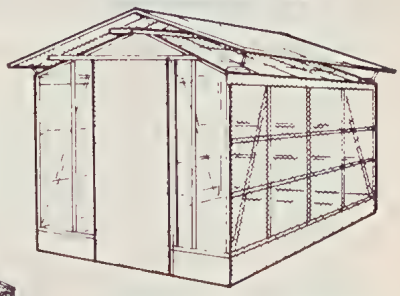
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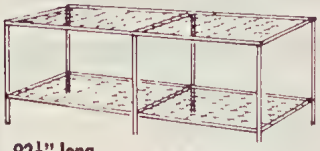


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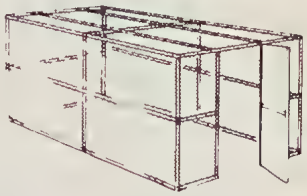
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VICTORIAN ORCHID CLUB
ORCHID CLUB OF SOUTH AUSTRALIA
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TASMANIAN ORCHID SOCIETY

Vol. 48, No. 4 $4.00
December Quarter 1983
Registered by Australia Post Publication No. NBH 0770



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Cymbidium **(unregistered grex) 'Infra Red' grown by Mr B. Bailey of South Australia**

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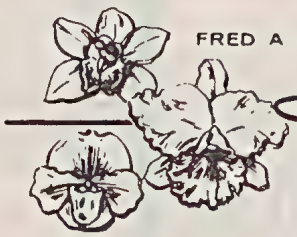
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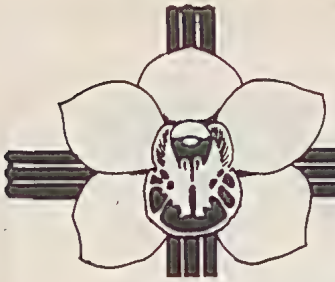
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WHERE PARENTAGE COUNTS



The top colour print shows Alvin Bryant 'Regal'.

This clone was bred from White Christmas 'Snowdrift' and Fanfare 'St. Francis' 4N. It first flowered in May 1978 (two years from the flask) and on subsequent flowerings produced up to 25 blooms on a raceme.

The next three prints were sent over from New Zealand by Mr Elfleet as a sampling of the Alvin Bryant 'Regal' x Lunagrad 'Elanora' 4N cross. This cross first started flowering in June 1982 (also two years from the flask) throwing a succession of extremely fine June and July clones in colours of green, pink, yellow and white.

It is crosses such as these originating from our nursery which are rapidly changing standards in today's early flowers.







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DECEMBER QUARTER
Vol. 48 No. 4

Printed and Published by:
GRAPHIC WORLD
14 McGill Street, Lewisham 2049
560 6166

- **Editorial Associates:**
QUEENSLAND: Mr Frank Oelkers, 419 Robinson Road, Geebung 4034.
VICTORIA: Mrs I. Hutchins, 37 Elliot Street, Mordialloc, Victoria 3195.
SOUTH AUSTRALIA: Mr N. Lenkic, GPO Box 730, Adelaide, SA 5001.
WESTERN AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154.
TASMANIA: Mr C. Nicholas, 7 Kelvin Avenue, Moonah, Tasmania 7009.
INTERNATIONAL: Mr G. H. Slade, Box 797, Vila, Vanuatu.
- **Editor: Ronald Kerr.**
- **Editorial Committee:**
R. KERR, G. HANSEN
A. B. PORTER, R. MILLER
- **Address Editorial to:**
R. KERR, 260 Geoffrey Road Chittaway Point, NSW 2259 Phone: (043) 88 2605
- **Advertising, address to:**
ELIZABETH LOWE, 14 McGill Street, Lewisham, NSW 2049. Phone (02) 560 6166
- **SUBSCRIPTIONS.** 1984. Within Australia $15.00. Overseas surface $16.50 or $US15.50. Airmail rates on request.

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Contact these secretaries:
NSW: Miss B. Oldfield, 61 Mountford Avenue, Guildford 2161.
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SOUTH AUSTRALIA: Mr D. J. Harris, 36 East Avenue, Black Forest 5035. Phone: 297 7525.
WEST AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154. Phone: 330 2132.
TASMANIA: Mr J. F. Smith, 11 Warren Court, Howrah 7018. Phone: 44 1555.
NORTHERN TERRITORY: Mr A. McGregor, PO Box 38493, Winnellie 5789. Phone: 81 8436.

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To comply with the International Code of Botanical Nomenclature the whole of a species is in *italics* and the second term has no capital. With hybrids only the first term is in *italics*, the second starts with a capital and is not latinised. Generic names, used in a non-botanical sense do not have a capital nor are they in italics. In society bulletins and on place-cards italics can be indicated by underlining.

COVER STORY

Spectacular colour gained this fine intermediate cymbidium its provisional Award of Distinction. The award will be confirmed when registration is completed. Parent plants are *Cym.* (Warella x Whyba). The award for Orchid of the Year goes to *Phalaenopsis* Sylvania Fair 'Doris Lanyon' illustrated on the centre pages. Congratulations to Mr Bailey for his *Award of Distinction of the Year* and to Mr Lanyon of Hamilton, Victoria, for *Orchid of the Year.*

Native Orchid Conservation at Currumbin Sanctuary

JOE W. BAILES



The Gold Coast Orchid Society Conservation area situated in the Currumbin Sanctuary which belongs to the National Trust, Queensland and through an Act of Parliament, is owned in trust for the people of Queensland.

The grounds cover an area of 39½ hectares and comprise areas of garden, open forests, rain forests, swamps and waterways.

Since the sanctuary was bequeathed to the National Trust in 1976, a vast programme for its improvement has been undertaken. Today, it's a fascinating bushland dedicated to conservation and environmental matters; to conserving and developing a national habitat for Australian flora and fauna.

The sanctuary today is not only a major tourist attraction but is also growing in importance as an educational centre for research into Australian flora and fauna. In conjunction with various universities, major research programmes are being undertaken.

The Gold Coast Orchid Society has joined forces with the National Trust (Qld) and has undertaken to establish in the Currumbin Sanctuary a native orchid conservation area for the purpose of establishing and propagating as many genera and varieties of Australian native orchids as possible.

In undertaking this very rewarding project of preserving Australia's native orchids, the Gold Coast Orchid Society recognised that the gathering and establishing of these native orchids would take many months — even years — and would only be successful with the co-operation and support of orchid lovers and of orchid societies throughout Australia.

The **1st Stage** established by this society is a large display area with a mass planting of Dendrobium speciosum on a rocky hillside, surrounded by a display of allied dendrobiums and many other genera. This has created tremendous public interest apart from that of teachers and students, who have now added "orchids" to the subjects discussed by primary school students. Many prominent orchid growers, including members of the Australian Orchid Foundation, have also visited the area and all agree that the area has tremendous possibilities.

The **next stage** agreed upon by the Trust and the Gold Coast Orchid Society is the building of

two (2) orchid houses. These will be hexagonal in shape, with a tepee type roof.

The first house to be built will be furnished inside as a forest, with forked logs planted as trees, as well as rockeries and a waterway to provide a suitable atmosphere for our northern orchid genera.

The second house will be an all purpose house, large enough to provide suitable conditions for the differing requirements of our native species.

Houses will be locked but will have walk ways through them for public viewing.

The area selected for these orchid houses is ideal in every way. It is near a forest area which has many trees waiting to accommodate any willing orchid looking for a home.

Dear Orchid Lovers, The Gold Coast Orchid Society is confident that, when you have considered this brief report, this worthy project will receive your support. We invite both your interest and your assistance in building this beautiful native orchid conservation area.

To achieve the objective entered into with the National Trust we need to search throughout the Commonwealth for the many different native orchid species, and hence the assistance from conservationists throughout Australia in collecting and establishing them in the sanctuary. Australian species of all genera and varieties are urgently required.

If you are unable to send us plants, perhaps you can encourage a friend to do so, or make a donation for the purchase of plants, payment of freight or for one of the many incidental costs that occur.

The society is keeping an honour roll of all gifts of plants or cash.

We welcome your support for this worthwhile project and any enquiries relating to it will be answered forthwith and with pleasure.

We ask you to bear in mind our project and assist if at all possible the conservation of our Australian orchid genera for public viewing now and for that of future generations.

J.W. Bailes for
The Gold Coast Orchid Society
Conservation Committee
3 Jabiru Ave, Burleigh Heads, Qld 4220.
Telephone (075) 35 4809

TOWNSVILLE QUERY ON CORK

At a meeting of the Townsville Orchid Society a member asked "Are slabs of cork good for orchid growing?" The society's experts pointed out that orchids on cork must be watered more. Also that there is a borer which lays its eggs in the cork and when the young hatch they eat the orchid leaves. It would be interesting to know if this borer is found in other areas.



Dendrobium rigidum
by Mair Swann

MEET MAIR SWANN

Mair Swann's orchid talk at the Townsville Conference shone with the love of them. As did her paintings.

Being a botanical artist she observes them more intimately than most of us. Many of her beautiful paintings of North Queensland orchids were on show at the Conference.

Mair came to Australia only two years ago, on what was intended as a short visit to her son, but quickly fell to the spell of North Queensland. Now she is established in a neat little house at Atherton.

For many years Mair did freelance botanical art for the Royal Botanic Gardens at Kew. Much of her work was on orchids, although she is just as experienced with other plants. Her versatility is apparent in her 72 paintings for *The Mountain Flowers of Tanzania* by Cribb and Leedal.

Mair Swann thinks there is terrific scope for her work in North Queensland but told AOR that she hopes to also obtain commissions for work from anywhere in Australia. She is prepared to spend time in any area where sufficient work is available. That could appeal to some publishers of garden and botanical books.

Control of bulb rot in orchids

Several fungi can cause bulb rot or black rot in orchids, the main ones belonging to the groups *Pythium* and *Phytophthora*. These are related soil inhabiting diseases which can be difficult to control, particularly when conditions are warm and moist. Thus bulb rots are most prevalent under conditions of high rainfall or over-watering during October to December and also during the autumn period, especially when earlier fungicide treatment has not been carried out.

The fungi which cause bulb rots are very common and can be introduced in contaminated potting soil and also in water from polluted dams. Unlike some other diseases, these fungi are not readily spread through the air but depend more on rain splash or mechanical means to spread the spores.

Orchid plants can live in harmony with these diseases when conditions are relatively cool and dry. However when higher temperatures occur in combination with excess watering the disease symptoms rapidly develop, particularly if pots are poorly drained and water-logged.

For a number of years protective fungicides were used for control of these diseases but because no suitable curative product was available, high losses were common once a disease breakthrough occurred.

The new fungicide Fongarid® which has curative as well as protective properties against *Pythium* and *Phytophthora* fungi has enabled orchid growers to achieve a much higher level of bulb rot control. Fongarid is known to have a much greater safety margin on a wide variety of ornamental plant species particularly in the seedling stage and is the product normally recommended for use on ornamentals, including orchids.

People prefer to use the soil drench technique using Fongarid® 25 WP at a dilution of one gram product in one litre of water. This one litre of drench mixture will treat the following number of pots depending on pot size:

30 x 80 mm (3") pots
15 x 100 mm (4") pots
6 x 150 mm (6") pots
2 x 200 mm (8" or 1 gallon) pots
1 x 250 mm (10" or 2 gallon) pots

Although plants already showing early symptoms of the disease can be cured, it is far more preferable to apply the chemical as a protective measure at critical times of the year. Thus the soil drench treatment of Fongarid® should be carried out in the early spring and repeated six to ten weeks later. These two applications should provide bulb rot control throughout the entire spring/summer period except when weather conditions are exceptionally wet or watering is excessive. A further one or two soil drench treatments may be needed in the later summer to autumn period particularly if conditions favour the disease.

There is also evidence that Fongarid® stimulates the growth of some plants independent of disease control which would explain why so many good reports have followed the use of this fungicide, particularly on young plants.

The information below is based on details in a brochure from the manufacturers. AOR can take no responsibility for manufacturers' claims. However the incidence of bulb rots has been high this year and some growers report good results with Fongarid.® Please read this article in conjunction with the one by J. Morris in this issue. The latter is a very balanced appraisement of this problem. Readers should make up their own minds regarding trying any product mentioned in AOR.

BACTERIAL ROT

J. MORRIS

Heavy winter and spring rains in many areas has meant the appearance of rots in many orchids. Mr Morris, who is editor of the *Grafton Orchid World*, bulletin of the Grafton OS, and Dr J. Rae, have looked closely at this problem. Growers whose plants have been affected in this way will find this article of great value.

Most of us at one time or another have experienced the loss of a plant due to rot. The usual reaction is to isolate, and cut out the infected tissue, or destroy the plant. In nearly all cases we tend to spray or dip in a fungicidal solution, and in many instances this approach seems to work, because most of the rot like symptoms are the result of fungal infection.

There are times however when fungicides are not effective, even though different types, or mixtures of types are employed. In these instances the rot is usually of bacterial origin.

At Grafton we have had first hand experience with a particularly virulent strain of the bacterium *Pseudomanas* and this has resulted in a much better understanding of bacterial rot control,

chiefly due to the interest and good offices of Jim Rae, who was able to arrange for the culture and pathological determination of the bacteria. Dr Rae also researched the literature on the subject so that we at least knew of the approach others had made to treating not only this condition, but similar bacterial rot.

The general conclusions reached by reference to published material may help growers should they experience an outbreak of this disease.

The most important and fundamental consideration, when bacterial rot occurs, is to limit the spread of the bacteria. Even complete isolation of observed infections is only partially effective because these bacteria are carried and multiply in water and by the time symptoms appear on plants bacteria are probably present throughout the general area. The only practical approach appears to be the use of an all over dip for plants and a general area spray with a bacteriacide such as Physan 20. The manufacturer's recommended dilution for a sterilizing solution of Physan 20 is 15 ml to 4 litres of water.

Whilst this concentration is undoubtedly effective, there are some side effects — bud drop and marking of new leaves have been noted. Further reading indicated that a Physan concentration as low as 1 ml per gallon was effective on *Pseudomonas* and at 1.85 ml per gallon Physan was effective on *Enterobacter* (another common rot forming genus of bacteria). These are US gallons and correspond to a concentration of 0.26% and 0.48% respectively.

It would seem then, that a teaspoon (5 ml) of Physan to 5 litres of water (.1%), used as a spray, would give an effective control at an insignificant cost. The increase in strength is necessary because the bacteria to be dealt with will be in wet situations and thus the applied spray will be diluted.

The foregoing is directed at the prevention of further infection.

The actual diseased plant itself is not cured by spraying with Physan, nor have we had total success with any other compound, although a 2% solution of mercurochrome was found to dry out infected tissue that had broken down and limit the reservoir of infection. The only certain treatment seems to be to cut out the affected area — usually a small brown spot initially but at a later stage a larger, water soaked, pulpy area — and having done this, immerse the plant and container in Physan solution (to kill any bacteria released by the removal of plant tissue) and finally paint the edge of the cut with 2% mercurochrome and allow to dry. So much for bacterial attack.

In regard to the vexing question as to whether an infection is bacterial or fungal in origin there does not seem to be any means of positive identification short of pathological determination, although symptoms are broadly suggestive in some cases. A general survey of relevant literature shows that two fungicides — Benlate at three grams to two litres and Natripene, one gram to two litres will control the majority of fungus infections so that if these sprays are used initially — bearing in mind that there is a greater probability that the disease is of fungal rather than bacterial origin — and control is not achieved, the odds are that the problem is bacterial and should be treated as above.

To summarise, there are three sprays which should control and cure most fungal rots, and control the spread of (though not cure) bacterial rots. These are: Physan 20 used as a spray or dip at a concentration of 5ml/5 litres, Natripene used as a spray or dip at a concentration of 1g/2 litres, Benlate used as a spray at a concentration of 3g/2 litres.

To be assured of maximum effectiveness all three sprays would have to be used; the omission of one spray could render the programme ineffective. This treatment specifically deals with rots; it should be realised that many fungal and bacterial infections which are manifested by rots on one type of orchid show different symptoms — spotting, streaking etc, on other species. The above programme would therefore have much wider application than the specific circumstances for which it is proposed.

Tasmania's Conference

GWEN SMITH

The 8th Tasmanian Orchid Conference was friendly, informative, and a great success. With speakers like Deane Johnston, Andy Easton, Chris Nicholas, and registrants such as Tom Henry, and Clive Halls, to name a few, Tasmanians were treated to a feast of orchid wisdom. All five state societies were represented, and prizes were well spread between them. Grand Champion, Most Pre-eminent Entry, Best Australian Native Hybrid, all went to an outstanding specimen plant of *Dendrobium* Andrew Persson exhibited by J. and R. Cannon. Reserve Champion was *Cymbidium* Crackerjack 'Brown Velvet' exhibited by Launceston Orchid Society secretary, Rita Stronach.

Judge Deane Johnston was impressed with the quality of Australian natives in the exhibits. A first time exhibit by the ANOS Bass Group attracted Best Affiliated Society Stand, and a "Special Award" certificate.

The conference ended with dinner for 76 happy orchid lovers, and trophies were presented to the winners. For the unlucky ones "there's always next year".

"From the known examples of orchid-insect symbiosis it becomes clear that orchids have derived profit from two of the dynamic urges of animals: **hunger** and sex."
— Oakes Ames.

Orchid Stamp Club International

The world's first international orchid club was formed in Sydney on October 27, 1983. In letters around the world, Mr Barry Collins established that orchid thematic stamp collectors were crying out for exchanges of information on this aspect of the orchid hobby.

Periodical bulletins will contain advice on new issues, details of stamps for sale or exchange, dealers' data, historical and background information, exhibitions of orchid stamps, and items about collectors in various parts of the world.

Foundation officers of The Orchid Stamp Club International are: President, Barry Collins; Vice-President, Ron Chalmers; Hon. Secretary, Myra Chalmers, 25 Turriell Point Road, Lilli Pilli, Caringbah, NSW, Australia, 2229; Ass. Secretary, Alison Lyons; Hon. Treasurer, Robert Moon; Ass. Treasurer, Scott Salter.

Next meeting, Saturday January 21, 1984 at the Chalmers family home, 25 Turriell Point Road, Lilli Pilli, Caringbah.

Topic will be "How to present your plants for exhibition". Also formation of a Stamp Bank will be discussed.

The meeting starts at 3 pm and will continue after a meal break.

Subscription is $5 per individual or family. Overseas A$8.00. These will be largely devoted to the quarterly bulletin. They are now due.

Here is the story in Barry's own words:

This club has now had its first meeting. It is not necessary to attend meetings to be a member, in fact most members are outside Sydney.

The main business of the club will be to advise members via a periodical bulletin just what new orchid issues have been made, also news of impending ones.

Members will be able to advise surplus stamps for exchange or sale, also to make requests for stamps they require.

Details of available books on orchid stamps will be given together with news of helpful publications.

Stamp collecting is a hobby shared by millions of people throughout the world. It is pleasing, rewarding, and always interesting. Some collectors specialise in the stamps of their own country. Others collect groups of countries such as European, Asian, African or American.

Then there is the person who has only one interest. He is known as the thematic collector. He collects stamps depicting his own special interest such as ships and boats, flowers, scouts and guides, space exploration, art treasures, famous people and places, animals, marine life, trains, you name it.

Now orchids have become another thematic subject. People who collect orchid stamps are also almost invariably orchid growers. It is a wonderful combining of interests to collect both stamps and live stamps.

It is also a very good way of learning more about orchids. I am seeking the help of stamp dealers to supply details of orchid stamps they have in stock and their prices. Thus the club bulletin should be of immense help to any member. Members are invited to contribute any facts of interest about orchid stamps for publication.

In future Australian Orchid Conferences the main talking point may well be the beautiful displays of orchid stamps put on by members of the club.

For further details please contact me at this address: Barry Collins, PO Box 131, St Pauls, NSW 2031.

Orchid stamps issue

The Australian Orchid Campaign for an issue of Australian orchid stamps has succeeded.

Gerald McCraith is sitting on top of the world. Gerald started campaigning for this issue in 1968. He has written many times to the postal authorities, and induced many others to do the same.

This letter from Australia Post speaks for itself:

Mr G. McCraith
Chairman of Directors
Australian Orchid Foundation
107 Roberts Street
Essendon, Victoria 3040.

Dear Mr McCraith,

I refer to our previous correspondence concerning a stamp issue depicting "Australian Orchids".

I have pleasure in informing you that the 1986 stamp issue programme, which includes an issue on the theme of "Australian Orchids", was ratified by the Australian Postal Commission at their October meeting. The stamp issue will not specifically commemorate the 10th Australian Orchid Conference and International Orchid Show, Adelaide, September 1986, but will be timed to coincide with this event.

Yours sincerely,

R.T. Collier
for General Manager, Marketing

"With the discovery of artificial pollination the cultivation of *Vanilla* for its fruits had begun in the East Indies and in other parts of the Old World tropics."
— Oakes Ames.

NSW Orchid Workshop 1983

A fine venue, a glorious day, and good organisation, made the NSW Orchid Workshop, held at the picturesque Hawkesbury suburb of Berowra, a memorable occasion.

This was the first workshop held in conjunction with an affiliate society, the Berowra Orchid Society. The teamwork of OS of NSW Workshop Committee and Berowra Co-operation worked very well indeed. This policy of working in conjunction with an affiliate to attract newcomers to orchid growing and club membership is to continue in future years.

Mr Wal Rhodes of Berowra co-ordinated arrangements between the Workshop Committee and his society with superb efficiency. Berowra members carried out allotted tasks with enthusiasm, and Berowra ladies deserve the most flattering compliments for their catering.

Venue was the new Berowra Community Complex, a building with a huge carpeted ante room, graciously furnished, and a large hall and stage. A smaller hall was equipped with tables and chairs for lunch and tea breaks.

The hall was packed for lectures and demonstrations, but ample tea breaks gave enough time for registrants to mingle and talk orchids. Ten trade exhibitors showed products useful in orchid growing.

Most of those attending were folk attracted by local advertising and not members of a society. So the first item on the programme was an explanation of *What is an orchid,* given by acknowledgeable amateur botanist Mr Wal Upton. Then came a talk *Growing media explained* by Mr Les Peaty, the chairman of the Workshop Committee. The large audience was then broken up into four groups. Four demonstrators travelled from group to show in practical fashion ways of growing various genera.

Mr Alan Merriman covered cymbidium potting media and repotting. Mr Athol Bell did the same for paphiopedilums. Mr Werner Deisel dealt with bark as a growing medium and with terra cotta pots. Mr Ken Organ explained native and slab culture.

The afternoon sessions dealt with growing situations and management. This was given by such experts as Mr Roy Gifford on shade house culture; Messrs Jim Neal and Greg Dart on glasshouses; and Mr Selwyn Bell on garden culture. Mr Gordon Giles outlined preventative methods of pest and disease control.

A thought provoking explanation of fertilising and watering by Mr Alvin Bryant topped off the workshop.

All registrants received a free 10cm pot size seedling. Since the cost for the day was only $12, covering a book of printed proceedings, lunch and two tea breaks, plus very comfortable accommodation, everyone must have left conscious of having received value for money.

Best of all was the feeling of wonderful comradeship among all who attended, and the knowledge of having learnt a great deal from the day's events.

BOOK REVIEW

Disa uniflora — *Its propagation and cultivation*

This beautifully produced booklet on the growing of this glorious terrestrial was written by *Disa* expert Dr L. Vogelpoel.

In the past few months nine new hybrids with *D. uniflora* as one parent have been registered. Three *Disa* hybrids were registered in October 1982, and two in December 1981. A total of fourteen in the last two years. The only previous registrations totalled thirteen over the period 1891 to 1922.

This revival has been stimulated by the increasing awareness of South Africans of the treasure in their mountains, and by the formation of the Disa Orchid Society of South Africa.

Mr Gerald McCraith and others have demonstrated that they can be successfully grown in Australia. See AOR September 1983, page 175. The Australian Orchid Foundation is currently selling them. That is if there are any left. You'll need to write to the Australian Orchid Foundation, 107 Roberts Street, Essendon, 3040, to find out. Plantlets have been quoted at $10.00, and plants to flower this season at $20.00, but the latter are only available if three plantlets are also ordered.

Buyers of AOF plants can help protect their investment by sending for this book.

Wonderful photographs show the environment of the genus, also its various colour forms. The essentials of cultivation are carefully explained. They differ in details from the methods Gerald McCraith has proved successful in Australia, but fundamentals are the same. The booklet has additional data to that in Gerald's AOR article, such as habitat and ecology data, diseases and pests, and a little on hybrids. Thus the AOR article and this book are complimentary.

Whether to further your interest or to protect your investment in the genus this book is well worth the price tag. Send for your copy to the Australian Orchid Foundation, 107 Roberts Street, Essendon, Victoria 3040, at $6.00.

BOOK REVIEW

"A Year of Orchids": The biology and painting of Australian terrestrial orchids.

P.B. ADAMS

A collection of oil paintings by Australian artist Clifton Pugh is the basis of a new book on orchids recently published by Richard Griffin in Melbourne. "A Year of Orchids" began when Griffin saw the paintings on the walls of the artist's studio at Cottlesbridge in the Yarra Valley. Conservation has long been an important influence on the subject material of Clifton Pugh's painting, and he has been observing and painting native orchids and wildflowers on his property for the past fifteen years. His concern has been to record on canvas the outstanding range of terrestrial orchids, which are rapidly declining with suburban expansion. Two botanists, Campbell and David Beardsell have written a text, and his wife Adriane Strampp and son Dailan have illustrated the book with superb line drawings.

One of my most distinctive early memories is of after-school adventures looking for terrestrial orchids in the bush near our home in the dry eucalypt forests of the Yarra Valley. The striking colours and ornamentations of these plants coming up from the ground each spring and autumn made a larger than life impression on us, with the advantage of a child's view. In school breaks we escaped from the grounds and became explorers amongst abandoned gold mines, the habitat of over forty orchid species. A few flowers were picked each year, pressed, and stuck into small books made from scraps of ironed brown paper. We had our own names and could list the order of flowering from winter to autumn — nodding greenhood, tree greenhood, frog-mouth (Pterostylis), cowslip and donkey orchid (Diuris), spiders and pink fingers (Caladenia), waxlip (Glossodia) and star (sun) orchids (Thelymitra).

"A Year of Orchids" represents this progression of flowering of the 91 species of the Yarra Valley. In a few places only, they remain in such intensity of numbers to be a major botanical feature and attraction within easy reach of Melbourne. Clifton Pugh in his definitive style has captured the bizarre beauty of over 40 orchids in 28 superb colour plates. He has also caught in the background of each painting, the atmosphere of the dry undisturbed bushland habitat of the region. The plates lose little if anything in comparison with the original paintings. The accompanying collection and beautiful line drawings by Adriane Strampp, Dailan Pugh and David Beardsell enable easy identification of species.

Conservation is a major theme of the book, which develops from the disturbing lists presented of species which have entirely disappeared from some areas, and the six species that have become extinct. Twelve further species are locally extinct in the Yarra Valley, and another 22 are known from less than five small colonies (page 11). The book is an important and timely contribution to the appreciation that is required to halt the complete destruction of habitat.

> "Greedy and acquisitive Europeans stepped into a magical wonderful diverse land with which the aborigines were in perfect harmony. Within 200 years, much of this land has disappeared."
>
> Charles McCubbin, launching the book on October 10, 1983.

Where local landholders and communities have a knowledge, love and pride in their own bushland, habitat and orchids **have** been successfully preserved in wildflower sanctuaries. More often, clearance has been complete before anyone considered what might be lost.

Plant descriptions alongside the line drawings help to confirm identification. References in the text and drawings to associated plants help in the recognition of different habitats. The text offers new information on distribution and biology, and a synthesis of what is known about habitat, history and conservation status.

Exact locations of species have not been revealed as this would invite destruction by ruthless collectors. Many of the species are not easily adapted to cultivation, and some will not grow at all outside their habitat. "Orchids should be left in the bush as they are found, and the area around them disturbed as little as possible" (page 12).

This is a book for the native orchid enthusiast, especially those with a strong interest in terrestrials. The art lover, illustrator, bushwalker, naturalist, and botanist, will all find value in the 208 pages, containing over 100 illustrations. Many of these orchids extend throughout Victoria and to other states. The book will therefore appeal to people throughout Australia, and the habitat descriptions will help those who wish to create an environment for successful cultivation.

There have been only a small number of major books about Australian orchids, produced at irregular intervals. Nearly all of these, including Nicholls, Dockrill and Fitzgerald, are long out of print and when available are priced at several hundred dollars. At $75, this book is an important orchid and art work, and a collector's item of real value.

Richard Griffin has published a limited edition of 1500 copies. The cloth edition is now available at bookshops. Orders can be made direct to the publisher, Richard Griffin, PO Box 147, South Melbourne, Vic 3205.

CYMBIDIUMS TOPS AT SANTA BARBARA

Ian Whitcombe has been acquiring quite a reputation for his cymbidium crosses. Many clones from these have been very successful at Victorian shows over the last two or three years. This year he was invited to contribute a paper at the 39th Santa Barbara International Orchid Show. This show is held right at the flush of the California cymbidium season. It has a deserved reputation for presenting the world's top cymbidium display.

Ian was very impressed by the displays put on by nurseries and individuals. Emphasis was on a few top quality plants combined with blending decoration and theme. In fact, on one particular stand, theme overshadowed floral display.

After the show Ian visited orchid nurseries and was astounded by their size. At one 40 hectare nursery he photographed a hectare of *Cymbidium* Valya Craig in bloom so dense that leaves could hardly be seen. At this nursery the plants are watered overhead even when in bloom, using very fine misting nozzles.

FLORA CULTURE PTY LTD

"Seeking Perfection"



Cym. Tetsegetsu

Am I a pumilum?

This plant was obtained as pumilum Tetsegetsu however, there is doubt it is a pumilum. The spikes are upright out of the foliage and they do not require support. Obtained from Melbourne where it has been in a private collection for many years. We would be grateful for any information.

ARE YOU ON THE MAILING LIST?

The current list includes miniature cymbidium seedlings such as: Tetsegetsu x Hamsey 'The Globe', Tetsegetsu x Terama 'Robin', Tetsegetsu x Coraki 'Norah', Tetsegetsu x Sylvania 'Sonnet', Tetsegetsu x Sensation 'Chianti', Tetsegetsu x Kiata 'Nightshade', Kiata Nightshade x devonianum, Maddidum x Oralee 'Braemar' plus many more miniature cymbidium seedlings.

Also included in the new list — native hybrids, exotic species, cool-growing oncidiums, equitant oncidiums, cattleya alliance hybrids, miniature softcanes and miscellaneous hybrids.

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Making Quantitative Genetic Charts

IAN WHITCOMBE

In this introduction to the "Quantitative Genetic Charts", I set out to discuss why and how I became involved in the search for what I call "The Patterns of Nature", in relation to flower quality, and colour inheritance in cymbidiums.

Until very recently, I must admit I had been groping in the gloom that appears to have been part of orchid hybridizing from the very beginning. Now no doubt great stores of knowledge and intuitive brilliance have been developed by individuals at various times and places throughout the orchid world. I guess it was due to commercial considerations that this wealth of knowledge has not been recorded and published, for the long term benefit of all concerned. In practice this has meant that each hybridist in each generation has to start from scratch; and "Oh" how little progress each of us can make in our time. Where would we be today, at the end of the 20th century, if the medical and scientific professions had not recorded their findings in great detail, over the centuries. Surely we could have expected something like this from the giants in our own field!

For instance, what have we been told of the hybridists long struggle to build and improve the red lines, only to see the red recede to pink or green and honey colours, in one generation — one of the notorious examples of this behaviour is the cross: Cremona x Claudette = Claudona, or expressed in colour: red brown x green and honey = green and honey colours.

Cremona would be one of the best red brown gene pools we have, yet in this cross the red did not appear as expected. Richard Spencer's article "Gambling on exhibition cymbidiums", in the *Orchid Advocate* of Vol. V No. 3 makes a generalized assumption that most characteristics in cymbidiums are neither dominant nor recessive. His work on breeding for award quality flowers is of great importance. However in relation to red and brown breeding I would like to add that in some crosses this is true, but in others the red is indeed recessive. What we need to know is why? This recessiveness in the red and brown area proved to be a problem of great depth, then when I was researching for the Paper I was to present at the 8th Annual Seminar of the Cymbidium Society of America at Santa Barbara in March 1983, suddenly the light flashed through, and a totally new concept emerged which I call the Graphic or "Quantitative Genetic Chart". These charts show at a glance the percentage of each species in a hybrid.

The development of these charts leads to:

1. Profiles for each of the basic cymbidium colours.
2. The relationships which control, among other factors, high colour inheritance.
3. More accurate predictions of the colour range in a seedling cross.
4. Finally, to models of the ultimate cymbidiums of the future.

As I see it now, the driving force in cymbidium breeding has always been largely intuition, rather than any depth of understanding of the underlying "Patterns of Nature". — You may well ask, what are these "Patterns", and how are we to reach an understanding of them?

In this and future articles I hope to show you something of the progress I have made towards this end. For the moment, however, let us look at the development of the Graphic or "Quantitative Genetic Chart", and how it is an important extension of the *Family Tree.*

The Family Tree will always be of great importance as a record of the path the hybridist used to reach his goal — and of course it provides the information necessary to construct the Graphic or "Quantitative Genetic Chart".

The Graphic or *Quantitative Genetic Chart* however, shows at a glance the balance of species locked up in a particular hybrid. Its further development leads into many important areas of research.

The Patterns of Nature — as I see it are the hidden, as well as the obvious characteristics and relationships in, and between, the various species involved in our present day hybrids.

Only when we have established these patterns, can we really begin to work towards the ultimate potential of the species. Now let us take *C.* Claudona as an example — it is a relatively simple, yet I believe an immensely important hybrid for future breeding, and also capable of showing us many things, if only we *will* see the answers.

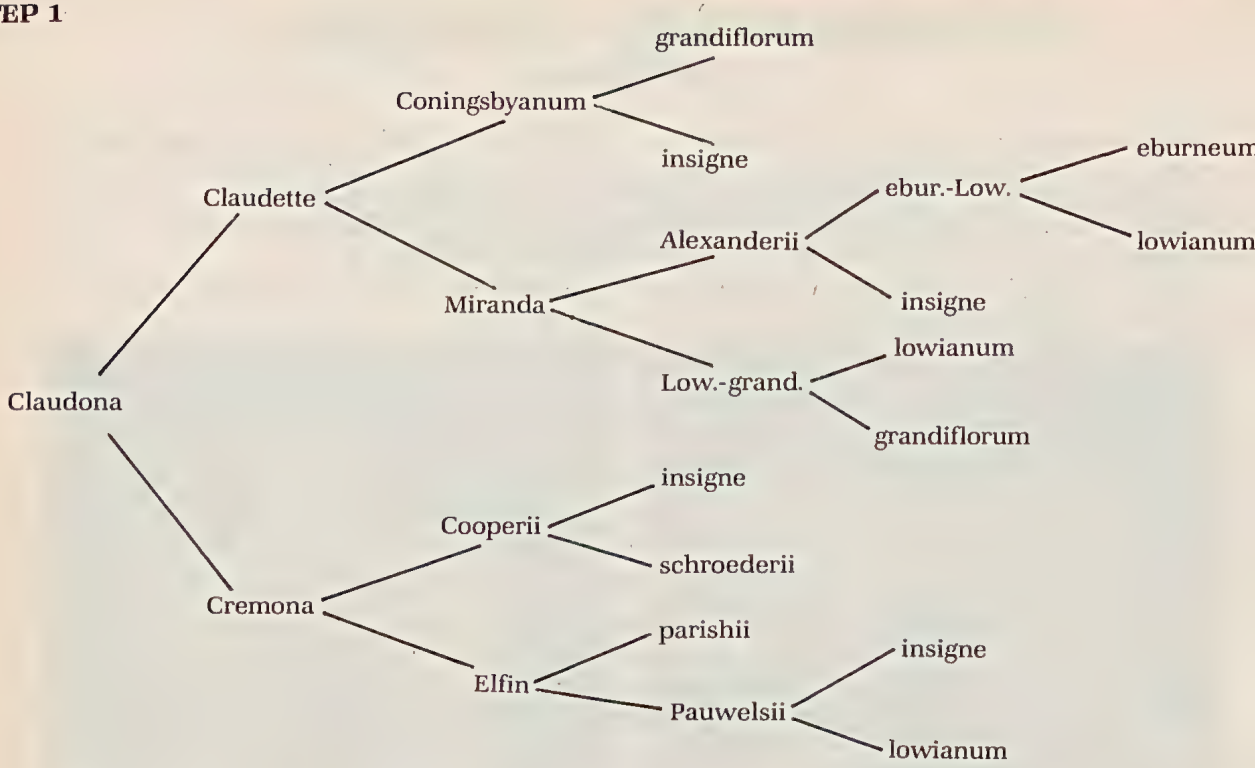
To prepare your first Chart:

Step 1. Draw out the *Family Tree* using "Sanders list of orchid hybrids", or "Koesters Cymbidium List". The latter offers the advantage of listing awarded clones, and in many instances, their colours. Later you will see just how important these colour records are, as they enable us to establish the limits of each species in a hybrid in relation to the various colours.

Step 2. Jot down the fractions of each species in the hybrid under research, then these fractions are reduced to the lowest common denominator — in this case 1/32nd.

Step 3. Reduce these fractions to percentages —

STEP 1



1/1 1/2 1/4 1/8 1/16 1/32

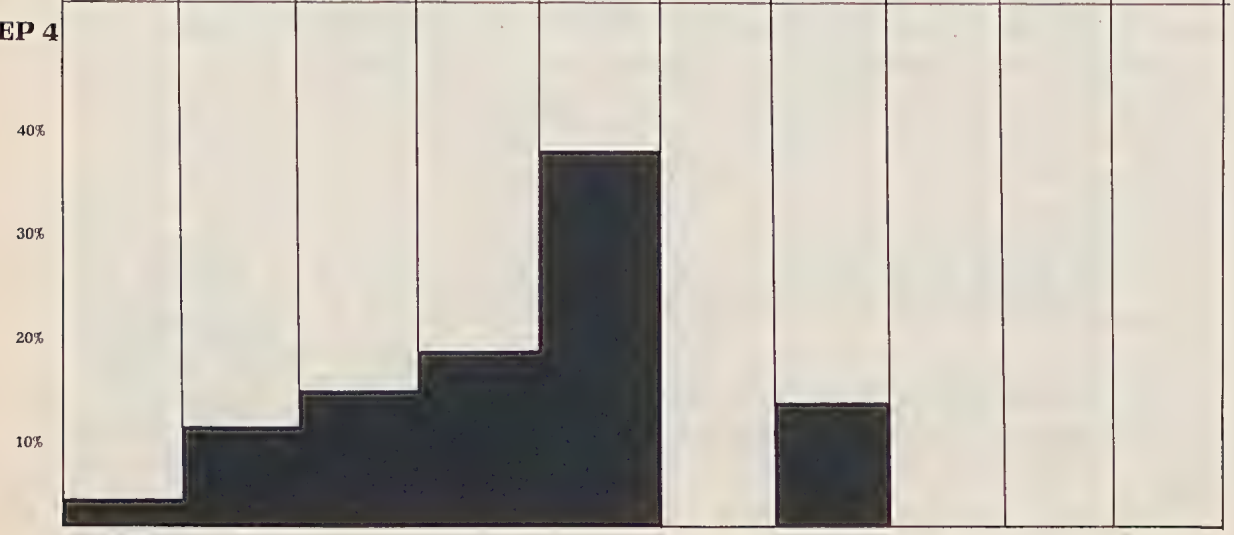
STEP 2

eburneum	parishii	lowianum	grandiflorum	insigne	?ansonii	schroederii	× Ruby	traceyanum	erythrostylum
1/32	1/8	1/32	1/16	1/16		1/8			
		1/16	1/8	1/16					
		1/16		1/8					
				1/8					

STEP 3

1/32	4/32	5/32	6/32	12/32		4/32			
3.1%	12.5%	15.6%	18.8%	37.5%		12.5%			

STEP 4



in which form they are of infinitely greater value as they are easily manipulated, or analysed, either mentally or with the aid of a computer.

Step 4. We are now in a position to draw up a Graphic or *Quantitative Genetic Chart.* With a little experience the researcher will be able to make useful judgments on the basis of this Chart alone, and soon he will find that each basic colour has its own recognisable chart pattern.

The Chart of Claudona falls well within the green range, but the 12.5 per cent of *C. schroederi* present, indicates a moderate brown to red potential. In spite of the obvious reluctance of Claudona to give up its ultimate colour potential, and perhaps because of this reluctance, my interest in the problem of high colour inheritance has risen over the years. I now believe more strongly than ever, that Claudona is the ultimate source of good browns — with a bonus of rose and red. After several months of intense research some of the relevant *Patterns of Nature* have yielded their secrets. Now it is only a matter of time before we begin to see the flow of colour from this cornucopia, called *C.* Claudona.

6-14 Plantation Rd, Corio, Vic. 3214

MAIL BAG

PUBLICISE YOUR NURSERY

The Editor,

I am currently researching historical horticulture, that is nurseries, nurserymen and seedsmen and includes their lists and catalogues and am writing to you with the hope of appealing through your pages to your readers and advertisers including seedsmen and nurserymen for any present (current) or old seed or plant (nursery) catalogues or lists which they may care to send me to assist in this work.

I am a Technical Officer with the Adelaide Botanic Gardens and have published a book titled "Years of Endeavour" which covers this subject in South Australia and am now working on other areas.

The catalogues and lists received will eventually be listed and the list published then the information contained therein made available for other researchers. Thus developing a valuable horticultural resource.

In addition I would be thankful if seedsmen and nurserymen answering my appeal could furnish me with the following information about themselves: 1. Official name of business, 2. When (year) and where (address) started, 3. Owners' names over the years, 4. Type of stock traded at beginning.

Hoping you can help me in my quest and thanking you in anticipation.

Yours sincerely,
Robert F.G. Swinbourne, FLS
Technical Officer, Adelaide Botanic Gardens.

"Orchid societies could contribute to the conservation of orchids by organising a survey that will determine which orchid species are truly endangered. Such a study would be very useful for all phases of conservation."

Dressler in **The Orchids.**

Catalogues received

This summary to orchid nursery catalogues is in no special order. It is purely a service guide whereby you can make your own determinations and no responsibility can be taken by AOR for any transaction between buyer and seller. However all nurseries mentioned do have a high reputation.

Mackinney's Nursery 1983-84. A very comprehensive listing. A big range in the cattleya alliance in seedlings and mericlones, plus all types of cymbidiums. Paphiopedilum seedlings include primary hybrids. A few phalaenopsis. Interesting species and unusual crossings. 24 pages, small quarto and small print. 87 Turton Street, Sunnybank, Brisbane, Qld 4109.

Deane's Orchid Nursery. Covers almost identical range to Mackinneys. Also accessories and books. 24 quarto pages. 29 Hemmers Road, Dural, NSW 2158.

Sunshine Orchid Nursery. Big range in all wanted genera, plus huge range of accessories. Has the Sunshine fertiliser dispenser which many growers are finding valuable for slow foliar feeding. 26 foolscap pages. 2034 Roghan Road, Bald Hills, Qld 4036.

Boom City Orchids. Wide range of flasks of cattleya alliance crosses and mericlones. A few phalaenopsis and vandas. Small two to five plant flasks of mericlones a feature. 7 pages. PO Box 623, Gladstone, Qld 4680.

Keith's Nursery. Wide list of dendrobium seedlings, also cattleya seedlings and mericlones. Flowering size species in popular genera. Some flasks. Four A4 pages. 27 Goraki Street, Townsville, Qld 4811.

Aranbeem Orchids. Good range of cattleya seedlings and mericlones. Also dendrobiums, miniature oncidiums and other genera. Produce several listings during year. PO Box 96, Deception Bay, Qld 4508.

Hilder's Nursery. Advanced plants in many genera, including some natives. Good range in cattleya alliance. Foliage plants and rare ferns. 8 foolscap pages. PO Box 18, Upper Stone, via Ingham, Qld 4850.

Lonne's Orchid Nursery. Somewhat cramped and hard to read but full of interesting species and natives. If looking for the unusual start here. 12 pages, small quarto. PO Box 1059, Cairns, Qld 4870.

Magnetic Orchids. Small catalogue, small type, but packed with interesting items in cattleyas, dendrobiums, and vandaceous. 43 Arthur Street, Aitkenvale, Townsville, Qld 4814.

Nindethana Orchids. Native hybrid listings are full of interest. Many of them are F2 and F3 crossings from top parents. Also many crosses and mericlones of miniature and intermediate cymbidiums. 5 pages A4 size. PO Box 94, Mitcham, Vic 3132.

Adelaide Orchids. Titled *Orchids out of this World.* 30 pages and cover in colour. Huge range of cymbidiums including many fine intermediates. Range of beautiful paphiopedilums. Also showy hybrids of masdevallia, stanhopeas, oncidiums, miltonias, zygopetalums, and odontoglossum alliance. PO Box 1, O'Halloran Hill, SA 5158.

"Our knowledge and understanding of mineral nutrition of epiphytes is often prejudiced by our experiences in a terrestrial (i.e. soil) environment."

— Poole and Sheehan in *Orchid Biology.*

SOCIETY NEWS

ORCHID SOCIETY FORMS IN CANBERRA

A group of thirty orchid enthusiasts has established the Orchid Society of Canberra and District.

This news came as we went to press and full details will be published in the next issue. It is anticipated that a few members of the Orchid Society of NSW will arrange for a day in Canberra to help the new society become established.

Canberra, Queanbeyan, and district folk interested in joining the new society should contact the secretary, Mr Brian Davies, at 28 Ashburton Circuit, Kaleen, ACT 2617.

Brisbane's great Charity Orchid Show

Phyliss Cotton writes: "My favourite society, the Brisbane Orchid Society will hold its Charity Show for 1984 on Saturday, March 31 and Sunday, April 1 — again at Zupps Motors, 1310 Logan Road, Mt Gravatt. This company is very kind to us.

Proceeds will assist our all time charity The Queensland School for the Deaf. We were more than delighted to raise $2,700 for the school last year, but this year we were able to do a $1,000 better. Our cheque for $3,700 was donated to the P. and C. Committee, making a total of $21,120 from eleven shows. In addition we have given numerous amounts from time to time to national disaster funds and other worthy causes.

Brisbane folk, and visitors to Brisbane around the end of March 1984, don't fail to see this wonderful show.

SOUTH AUSTRALIAN ORCHID CLUB PHONE NO

Under the listing of the Orchid Club of South Australia officers on page 209, September issue, the phone number of honorary secretary, Mr John Harris is incorrect. It is correctly 297 7525. Sorry about that John.

NEW SECRETARY FOR NORTHERN DISTRICTS OS

Mr R.C. Kennedy is the new secretary for Perth's Northern Districts Orchid Society. His address is 9 Pollard Street, Glenalough, WA 6016. This active society meets on the fourth Monday each month at the Alf Faulkner Hall, Eden Hill.

Ira Butler Trophy

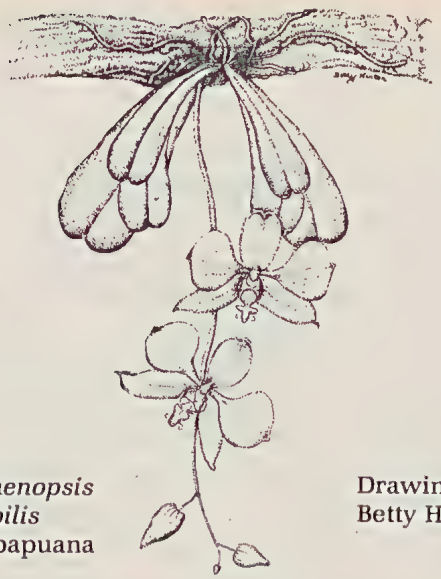
Correction by Committee

The Ira Butler Trophy Committee advises that inadvertently it assigned ownership of the winning plant for *Australian Native Orchid of the Year* to Mr Wal Upton, as published in the June issue of AOR, page 116.

The owners of this fine plant, *Dendrobium* Hilda Poxon, and to whom full credit is due for its culture, are the well known growers D. and J. Jones of West Pennant Hills. The Committee greatly regrets this error.

CORRECTION

In the September issue (p. 193) the editor added a sentence to the effect that *Calanthe augustifolia* and *C. cardioglossa* might be hybrids. Mr Bill Huddy points out that they are both species. Apologies Bill.



Phalaenopsis amabilis var. papuana

Drawing by Betty Hinton

Art team loves the bush

Bill and Betty Hinton are a team imbued with the spirit of the North Queensland bush. Their hobbies have become their life — and their livelihood. Betty paints bush flowers, including orchids, and has art lovers clamouring for her pictures. Bill photographs them.

Betty held an exhibition at the Commonwealth Bank in Sydney a year or so ago. One picture of a group of native orchids attracted terrific interest. A Japanese gentleman offered her $5,000 for it. She refused. This group of orchids is a masterpiece and now Betty has made a limited edition of prints from it.

Betty and Bill arrived in the north over fifteen years ago and were immediately captivated. They live in Johnstone but periodically go bush to paint and photograph.

During the Ninth Australian Orchid Conference in Townsville Betty had an exhibition of paintings, nearly all of which were of North Queensland orchids. Together they have published a book of wildflower photos in colour. Bill processes his own negatives and is a perfectionist, which means that every one of the 102 illustrations in the book *A Wilderness in Bloom* is superb.

Bill is a very knowledgeable botanist and the plant descriptions are both interesting and accurate. They reveal a wonderful awareness of the ecology of rain forests, mountains, and plains.

To read this book is to enhance one's appreciation of the north. It is available at most northern tourist shops, and at the Laharum orchid nursery, run by Rudy and Doreen Piltz, at 142 Fulham Road, Gulliver, Townsville. Price $6.00, including postage.

The Ninth Australian Orchid Conference

The time is near the grower said
to talk of many a thing
Of catts and cyms and disas red
and Melbourne for a conference fling.
Mid September next is the time to note
Make very sure you don't miss the boat.

Apologies for the above but hopefully it will remind you to organise your holidays now so that you will be in Melbourne for Australia's great orchid event of 1984.

The Victorians are well organised to make this Ninth Australian Orchid Conference an exciting affair.

Show setting up is scheduled for Tuesday, September 11, and from then on it's a non stop programme until Sunday, September 16.

Kew Civic Centre is the venue for the Conference Show. It is within easy reach of the city and with numerous hotels and motels.

Kew Civic Centre is also the place for the cocktail party, judging seminar, and floral art lectures.

Conference papers will be presented on Friday, September 14 at the Southern Cross Hotel, which is also the venue for the banquet and AOC Annual Meeting.

Don't fail to join the cuckoo crowd at the Cuckoo Restaurant, Olinda. This will be a gay affair up in the high Dandenongs on the night of Thursday, September 13.

A notable feature is the Floral Art lecture to take place on Saturday morning, September 15. Several floral artists will work simultaneously and a speaker will maintain a continuous commentary as the arrangements develop. A valuable session indeed, but hurry your reservation as there is only seating for 120.

Conference speakers will cover some aspects of practical growing which will be new to Australian orchidists. Mr Athol Bell is to explain the culture of the increasingly popular genus *Lycaste*, while Mr Gerald McCraith will uncover some new trends in the culture of the odontoglossum alliance.

Other speakers are Dr J. Coker on virus; Mr D. Beardsall on Victorian terrestrials; Mr J. Bisset on species; Mr L. Peaty on the three cultivated types of cymbidiums; Mr M. Derham on growing Australian epiphytes; Mr D. Johnson on phalaenopsis culture in southern Australia; and Mr O. Grainger on cattleyas and national awards.

A special feature will deal with developmental behaviour of paphiopedilum orchids in Australia, given by Dr G. Marinos and Mrs Angela Cooper. Mrs Cooper is currently researching the meri-cloning of paphiopedilums which the Australian Orchid Foundation is supporting.

Conference Steering Committee. This committee consists of orchidists and administrators. Mr Ron Hodgins is chairman, and Mr Cyril Hutchins, vice chairman, with Mrs Ila Hutchins as secretary. Miss M. Ryan is looking after finance. Mr R. Evans is handling show arrangements; Mr R. Pearce the tours; and Miss J. Clark all printing and publications.

Your Host Society is, of course, the Victorian Orchid Club.

If your society has not received copies of the conference brochure, send for one now to The Secretary, Ninth Australian Orchid Conference, 37 Elliot Street, Mordialloc, Victoria 3195.

Eleventh World Orchid Conference

The Orchid Society of New South Wales party for this great event looks like totalling around fifty people. It will include several New Zealanders. There is still time to join this group but you must contact Mr Bill Smoothey immediately. His address is 15 Merlin Street, Roseville 2069.

This tour includes visits to Californian nurseries, Disney World, a couple of days on one of the West Indian islands, an archaeological trip to Tikal in Guatemala, and a few days in Hawaii and Tahiti. Jetset Tours have details.

Tours are being organised in at least two other states, but due to going to press early no details are available. Enquire to your state society secretary.

Coming events

Ninth Australian Orchid Conference. Melbourne, September 12-16, 1984. Send for descriptive leaflet to: The Secretary, 37 Elliot Street, Mordialloc, Vic 3195. Your host the Victorian Orchid Club.

Orchids Australia 1986. Tenth Australian Orchid Conference and International Exhibition. Adelaide, September 17-24, 1986. Celebrating South Australia's 150th Jubilee. Your host the Orchid Club of South Australia Inc.

Second NZ International Orchid Conference. Wellington, October 9-13, 1985. For brochure write to Mr John Addison, PO Box 5133, Wellington, New Zealand.

British Orchid Growers' Association Show. Old RHS Hall, Vincent Square, Westminster, London, March 20-21, 1984.

International Garden Festival. Liverpool, England. April to October, 1984. If going to Europe don't miss this.

Orchid Society of Great Britain. Spring Show. Syon Park, Brentford, Middlesex. April 15, 1984.

Santa Barbara International Orchid Show. California at Earl Warren Showgrounds, March 30-31 and April 1, 1984.

France. Parc de Vincennes, Paris. March 1984.

23rd ANNUAL GENERAL MEETING

Important Australian Orchid Council decisions

Mr C. Hill's Presidential Report summarised a year of progress. Queensland Orchid Society, as a result of the 7th Australian Orchid Conference had made a substantial contribution to AOC funds, and organisation for the Townsville, Melbourne and Adelaide conferences had been well advanced.

Mr Barry Collins had undertaken to organise the Australian Display for the 11th World Orchid Conference.

The Programme Library has new programmes and old ones have been updated. Mr McCraith has asked for the help of states in compiling programmes on judging. Demand for programmes is high.

On judging Mr Hill mentioned the efforts to ensure uniform judging throughout Australia. There was still need to ensure uniform interpretation of judging standards.

The President's Report was accepted unanimously.

Business. The Governor-General signified in a letter his acceptance of Patron to the Council.

Mr W. Upton advised that it was expected that a phamplet on conservation would be ready for the 1984 meeting.

Efforts to obtain better treatment for orchid imports were made during the year by Mr Hill. The Quarantine Department explained its policy and mentioned that many imported plants were in poor condition before treatment. Mr Hill's effort should ensure a more uniform application of quarantine treatment. Mr Slattery said that where plants are lost in quarantine a written case for reimbursement should be made.

Judging. The Registrar-General reported that the plant awarded as *Paphiopedilum barbatum* has been established, by reference to world authorities, as *P. callosum* and records altered accordingly.

Many judging matters were discussed and some alterations approved. These will be incorporated in the new Judging Handbook. The meeting approved printing 1500 copies of the handbook.

At the Judging Seminar on the previous day a new approach to the judging of *Vanda* and *Ascocenda* type orchids was proposed by NSW and commended by all State delegates. Mr Barry Paget said he regarded this proposal as an historic breakthrough. In essence it is based on combining the points for size and number of flowers, thus enabling vandas and ascocendas to be judged by the one standard.

At the seminar a thoughtful paper on a new standard for paphiopedilums was presented by Mr Doug Symons, a very experienced judge. This standard has not been looked at for over twenty years and many anomalies have become apparent.

Both these matters have been referred back to each State.

Slide programmes. Programme Librarian, Mr Gunter Haar was commended for his work.

Increased postage charges have become a problem and any donation by programme users to help offset this would be appreciated.

A new programme list has been circulated to all associate societies. It includes two new programmes by well known paphiopedilum grower, Mr John Marks, each of 66 slides. Nearly all species are shown, making it a real indepth examination of the basis of our modern hybrids. Even non-paph growers will like it.

Another new programme titled *The Ninth Group of National Awards* is a must for all wishing to keep up-to-date on all the best in orchids. Many of these awarded plants are being used in hybridising and are thus a guide to seedling buying.

In the twelve months ending June 30 last, an average of four programmes a week went out. Queensland took the most, 83, reflecting the large number of societies in that State, and the relative isolation of some of them. NSW took 53, and demand from most other States was in about the same ratio of society numbers, except Western Australia where no society took advantage of the service.

New Associates. Four societies were welcomed as AOC Associate Members. They are Hamilton OS (Vic); Scottsdale OS (Tas); Morisset and Lakes OS (NSW); and Midlands OS (Vic). The resignation of Bowen Orchid Society was received with regret.

General. Many minor matters, largely on administrative detail, were discussed. These would take too much space to deal with here.

Mr Abe Porter moved a vote of thanks to Townsville Orchid Society for their hospitality and conference organisation, carried with acclamation.

Mrs Sandy Goldsmith was thanked for taking over as minute secretary at short notice, owing to AOC secretary, Tania Tinney being called back to Brisbane due to a family illness.

Election of Officers. AOC Officers for 1983-84 are: President: Mr C. Hill of QOS; Vice-Presidents: Mr A. Bell (NSW) and Mr D. Gallagher (SA); Hon. Treasurer: Mr R. Williamson (QOS); Registrar General: Mr L. Peaty (NSW); Programme Director: Mr G. McCraith (VOC); Programme Librarian: Mr G. Haar; Public Relations: Vacant; Conservation Chairman: Mr W. Upton (NSW).

"About eighteen years after Columbus sailed westward to discover a new world, vanilla reached Spain and took its place among the staple products of trade."
— Oakes Ames.

Australian Orchid Council Awards for year ending June 30, 1983

Variety in genera was a feature of these awards, with numbers from each state in approximate ratio to population.

In the cattleya alliance the six awarded clones included one species. Paphiopedilums were dominant numerically with fifteen awards, including two to species and two to primary hybrids.

There were four awards to standard cymbidiums and five to intermediate cymbidiums. None to minicyms which reflects the inability of hybridisers to control small habit of growth.

The seven dendrobiums included two natives, one of them a species.

Three phalaenopsis awards included the Orchid of the Year.

Four vandaceous included the species *Aerides lawrenceae.* The latter genus is rarely awarded and to achieve such a distinction calls for not only a good species form but very good culture.

An award went to each of the genera *Catesetum, Lycasteria,* and *Miltonia.*

It is interesting to see that of the 47 awards five went to species orchids and two to primary hybrids. This would indicate that judges are applying the optional appreciation method of judging in cases where the plant merits it.

377 *Blc.* Laurel Margaret 'Laurel Margaret', AM/AOC-OSWA. From a cross of *Bc.* Evelyn Zuck and *Lc.* Terry Wayne. Segments a red purple with labellum shading to greyed orange. The throat veined purple. L. and M. Williams.

378 *Vanda* Memoria Fumiko Omotu 'Seaflower', HCC/AOC-OSWA. From *V.* Onomea x *V. coerulea.* Segments with white background and navy blue veins. Labellum a violet blue. P. Crick.

379 *Cymbidium* Brunette 'Chocolate Mint', AD/AOC-OCSA. An intermediate type carrying four racemes, one with thirteen open flowers with dark brown segments. The labellum had a yellow centre edged with dark brown. Flowers had a scent like boronia. Mr Simon Lankic.

380 *Aerides lawrenceae* 'Memoria Flem. Jorgensen', HCC/AOC-QOS. Three racemes with 22-23-7 flowers plus some buds. Flowers larger than the average. L. Fleming.

381 *Paphiopedilum* Transvaal 'Ann', HCC/AOC-QOS. A strong plant bred from *P. rothschildianum* and *P. chamberlainianum.* The spike carried two flowers and three buds. Petals were yellow and the dorsal yellow-green with red stripes, and the lip purple-red. P. and L. Cotton.

382 *Dendrobium bigibbum* var. *superbum* 'Blue Horizon', AD/AOC-QOA. Purple segments and a violet throat, with overall distinctive bluish tones. J. Mackinney.

383 *Phalaenopsis* Opaline 'Dundas', HCC/AOC-NSW. The cross: *P.* Henriette Lecoufle x Capitola. White segments, the labellum edged with yellow and with red-purple spots at base. Yellow keel with fine red purple spotting. H.E. Sheaves.

384 *Paphiopedilum charlesworthii* 'Croydon', HCC/AOC-NSW. A superior flower with a wide symmetrical dorsal, bright red-purple in colour. Yellow pouch and ventral with greyed orange tessellations. R. Deane.

385 *Catasetum* Orchidglade 'Orchidglade', AM/AOC-NSW. A cross between *C. pileatum* and *C. expansum.* Petals and labellum yellow-green heavily spotted greyed purple, with labellum centre yellow-orange. Sepals yellow-green. H.E. Sheaves.

386 *Vanda* Hilo Blue 'Neenah', AD/AOC-NSW. Scion of *V.* Bill Sutton and *V. coerulea.* Violet with darker tessellations. H.G. Hansen.

387 *Lycasteria* Alkina 'Kindred', AM/AOC-TASM. A cross registered by Cannons in 1978 between *Lycasteria* Darius and *Lycaste* Auburn. This well grown plant had two distinctive flowers held well above foliage. Mrs Gwen Smith.

388 *Dendrobium* Rachell Simpson 'Q'lander', HCC/AOC-QOS. Growth and flowers markedly better than its parents *D. canaliculatum* and *D. johannia.* One raceme carried 57 flowers and 23 buds. There were also three racemes with unopened buds. Judged by appreciation. H. Heydon.

389 *Paphiopedilum* St. Swithin 'Croydon', AM/AOC-NSW. A primary hybrid from *P. philippinense* and *P. rothschildianum.* Four shapely flowers on the one stem. Petals beautifully arched without twisting. Segments a yellow-green with stripes in dorsal and ventral, the petals both spotted and striped. R. Deane.

390 *Paphiopedilum purpuratum* 'Super Imp', HCC/AOC-OCSA. An excellent form of this species. Dorsal white with red-purple stripes. Ventral white with green stripes. Petals red-purple with veins and spots. Labellum a greyed purple. Adelaide Orchids.

391 *Phalaenopsis* Zauberrose 'Highercombe', HCC/AOC-OCSA. Parents are *P.* Lippezauber and *P.* Lipperose. An outstanding pink with a raceme of seven flowers. Johnstons Orchids.

392 *Dendrobium* Hilda Poxon 'The Lodge', HCC/AOC-OCSA. (*D. speciosum* x *D. tetragonum)* Three racemes of up to fifteen superior flowers. Yellow segments with spotting at base. Red throat. Mr and Mrs R. Rankin.

393 *Dendrobium* Maverick 'Ivy', HCC/AOC-OCSA. (*D.* Hickam Deb x *D.* Ale Ale Kai) Two racemes of nineteen outstanding red-purple flowers. J.C. and I.R. Marsh.

394 *Paphiopedilum* Barley Sugar 'Beverley', HCC/AOC-OCSA. (Bonderille x Sarella) Well flowered. Basically yellow segments. Dorsal edged white. Just missed AM. Lambert Orchids.

395 *Cymbidium* Inferno 'Little Tom', HCC/AOC-OCSA. Two erect racemes with a total of 32, yellow edged, yellow orange flowers. An intermediate. Tom Burian Orchids.

396 *Paphiopedilum* Lakeside 'Robert', HCC/AOC-NSW. (*P.* Honey Gorse x Hunters Point) A white dorsal overlaid pale green, radially striped, and diffused a grey purple. Greyed yellow petals overlaid greyed orange. Belvedere Orchids.

397 *Laeliocattleya* Shellie Compton 'Kim Louise', HCC/AOC-NSW. (*Lc.* Stanley Fouraker x *Lc.* Good Fairy) White segments with small purple splash on each petal. Labellum red-purple, white edged. Throat striped red-purple and yellow. R. Montgomery.

398 *Blc.* Sylvia Fry 'Dundas', AM/AOC-NSW. (*Blc.* Nacouchee x *C.* Bow Bells) Tepals a soft rose purple. Labellum a greyed purple with yellow throat. H.E. Sheaves.

399 *Paphiopedilum* Lostwood 'Moorilla', HCC/AOC-NSW. (*P.* Woodruff x *P.* Milmoore) White dorsal, yellow-green at base spotted greyed purple. Petals and labellum yellow-green with greyed purple overlay and spots at base. Near AM. J.L. Marks.

400 *Paphiopedilum* Maudiae 'Croydon', HCC/AOC-NSW. (*P. callosum* x *P. lawrencianum)* Markedly superior form and colour. Dorsal a greyed purple with yellow-green stripes at base. Petals yellow-green greyed purple on ends with spots on edges. Labellum a greyed purple. R. Deane.

401 *Paphiopedilum* British Bulldog 'Moorilla', HCC/AOC-NSW. (*P.* Winston Churchill x *P.* Small World) White dorsal with red-purple spots. Petals and labellum yellow-green with purple at base. J.L. Marks.

402 *Paphiopedilum* Opera Star 'Bess Cardwell', HCC/AOC-NSW. (*P.* Personality x *P.* Lyric) Base colour of dorsal a yellow-green overlaid with purple. Petals and labellum a yellow-green with greyed orange overlay. B. Cardwell.

403 *Cymbidium* Tongariro 'Margaret', HCC/AOC-NSW. (*C.* Arcadian Melody x *C.* Fanfare) Raceme of fourteen yellow-green flowers with faint touch of greyed purple. The labellum yellow-green with purple blotches. Near AM. R. Turtle.

404 *Cattleya* Earl 'Imperialis', HCC/AOC-NSW. (*C.* Empress Bells x *C* General Patton) A nice white with yellow base to labellum. H.E. Sheaves.

405 *Miltonia* Carpinteria 'Dundas', HCC/AOC-NSW. (*M.* Alan Iseri x *M* Franz Wichmann) A near AM. See illustration. H.E. Sheaves.

406 *Ascocenda* Bewitched 'Fate', HCC/AOC-NSW. (*V.* Bill Sutton x *Ascda.* Meda Arnold) Nineteen flowers, violet with purple veins. George Surbey.

407 *Dendrobium* Australian Beauty 'Magnificent', HCC/AOC-NSW. (*D. speciosum* x *D.* Meadie) Two strong upright racemes with 31 and 29 predominantly yellow flowers with speckled purple labellums. Slight touch of ceratobium in tepals. K. McFarlane.

408 Award of Distinction to above plant 407. K. McFarlane.

409 *Cymbidium* Little Bighorn 'Yowie Bay', HCC/AOC-NSW. An intermediate from the crossing *C.* Dag x *C.* Sussex Moor. Two racemes each with nineteen flowers, the segments yellow-green with red dusting and stripe centre of petals. Cream labellum with red blotches. Mrs Fay Jones.

410 *Paphiopedilum* Tenaj 'Gail', HCC/AOC-OCSA. (*P.* Honey Gorse x *P.* Sarella) Basically yellow-green with labellum a greyed yellow. A near AM. G. Forrest.

411 *Paphiopedilum* Ayjay 'Thos', HCC/AOC-NSW. (*P.* Maginot x *P.* Paeony) A white dorsal with splashes of yellow-green and spots of greyed purple. Petals and pouch yellow-green and touch of greyed purple. Belvedere Orchids.

412 *Cymbidium* Dutchmans Delight 'Margarieta', HCC/AOC-OSWA. (*C.* Pearl Balkis x *C.* Valley Flower) Two racemes total of 21 white flowers with greyed purple labellum, yellow in throat. J.W. Elzas.

413 *Cattleya aurantiaca* 'Gladeview', HCC/AOC-NSW. Interesting sibling cross of two fine forms of the species 'Yellow Giant' and 'Miami'. Four racemes held 13-14-15-16 flowers of good shape. A deep orange colour all over. Fay and Jack Bygrave.

414 *Cattleya* Irene Finney 'Spring Bounty, HCC/AOC-NSW. (*Lc.* Brino Alberts x *C.* J.A. Carbone) Purple tepals with red labellum blotched yellow-orange. A near AM. R.J. Montgomery.

415 *Cymbidium* Fairy 'Pink Perfection', HCC/AOC-OCSA. (*C.* Rincon x *C.* Fairy Wand) An intermediate type. Four racemes and total of 56 flowers. See illustration. Adelaide Orchids.

416 *Cymbidium* Tricia Allen 'Confidence', HCC/AOC-OCSA. (*C.* Amesbury x *C.* Radak) An intermediate with three racemes and 46 flowers. Excellent yellow-green. White lip overlaid red purple with spots. Adelaide Orchids.

417 *Cymbidium* Winter Fire 'Superlative', HCC/AOC-OCSA. An intermediate from *C.* Bexley Radiance x *C.* Gidget. Two racemes and 30 flowers predominantly a greyed purple. Adelaide Orchids.

418 *Dendrobium* Janine McFarlane 'Kev's', AD/AOC-QOS. (*D.* New Guinea x *D.* Joy Nevin) Outstanding in charm of colours and floriferousness. Strong yellows in segments with striking purple lip. K. McFarlane.

419 *Paphiopedilum* Olenus 'Grassdale', HCC/AOC-QOS. (*P. ciliolare* x *P. bellatulum*) Heavy textured and clean colours. See illustration. B. Lovell.

420 *Phalaenopsis* Sylvania Fair 'Doris Lanyon', AM/AOC-VOC. From a cross *P.* Fair Alice x *P.* Malibu River made by Alvin Bryant. Thirteen fully opened, perfectly positioned, white flowers with yellow lips, plus seven opening buds. AOC Orchid of the Year. See illustration. Grown by B. Lanyon. See illustration.

421 *Cymbidium* Jubilation 'Good as Gold', AD/AOC-VOC. (*C.* Wallara 'Gold Nugget' x *C.* Borough Green 'Conference') Two racemes with nine and ten flowers. See illustration. R. Hodgins.

422 *Paphiopedilum* Newsmaker 'Faye', HCC/AOC-OSWA. (*P.* World Cup x *P.* Nowara) Yellow-green dorsal with red-purple spotting. Petals suffused yellow-green. Pouch a greyed purple. R. Taylor.

423 *Cymbidium* Novocastrian 'Nancy', HCC/AOC-NSW. (*C.* Etta Barlow x *C.* San Miguel) Tepals yellow-green. Lip yellow with greyed purple spots. Near AM. S. Jackson.

Note. The *Award of Distinction of Year* was made to an unregistered plant. Registration has been applied for but a number will not be given to this award until the grex registration has been confirmed.

Orchids a family affair

Sydney's youngest hybridiser could well be David Banks. David is still a student and has been hybridising since about the age of twelve. His specialty is native hybrids. Over the last few years he has flowered hundreds and named a few.

During a talk to Parramatta and District Orchid Society Mr Sid Batchelor, a well known native grower, mentioned that in the society's first year in 1950 a young "snowy-haired" lad had joined. He was now the present secretary, Graeme Banks.

Sid's recollections reminded David that his father had joined only a few months after the society was formed, and this made him the youngest "old member" around.

David told AOR, "when mum and dad married in 1964 membership of the Parramatta Society became 'joint', and subsequently I changed it to family membership in 1965. So I've been a member for 18 years.

"Dad of course has been active over the years as secretary of PDOS for eight or nine years, a judge of NSW, three years as secretary of the AOC, and currently is AOF Seed Bank Curator. You can tell that I am very proud of him, and obviously he has influenced me more with orchid growing than anyone else."

David's plant of *Sarcochilus hartmannii* 'Kerri', AM/AOC-NSW was Champion Native at the recent Cumberland Orchid Circle's Spring Show. He has just registered two new crosses: *Dendrobium* Essie Banks (Hilda Poxon x *speciosum)* and *D.* Lynette Banks (Eureka x *speciosum).*

The orchid world will hear a lot more of David Banks.

WORTHY GESTURE BY GLADSTONE GROWERS

The Gladstone Orchid and Foliage Society recently presented a trophy to the City Beautification Committee as a prize in the Pensioner Section of the Spring Garden Competition.

As befits a boom city the Gladstone OFS is an active body with an interesting programme at meetings. These are held on the first Wednesday of each month in the Bowls Club Hall.

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Just a few of the wonderful 1982-83 AOC au

SEE FULL LIST OF AOC AWARDS ELSEWHERE IN THIS

The Judging Panels of all States confirmed a total of 47 Australian Orchid Council Awards for the year ending June 30, 1983.

Six of these were Awards of Merit and from these the AOC Orchid of the Year was selected by the votes of each State Judging Panel.

Highly-Commended Certificates were granted to 37 clones and confirmed Awards of Distinction to four.

Provisional Awards pending grex registration went to three fine plants. One of these achieved the accolade of Award of Distinction of the Year.

***Paphiopedilum* Olenus 'Grassdale', HCC/AOC-QOS**

A primary hybrid between the species *P. bellatulum* and *P. ciliolare*. The crossing was registered in 1895. This clone was grown by Mr B. Lovell of Brisbane.

Many lovely primary hybrids have been remade in recent years and this is possibly one such remake. It is a good example of a clone being awarded by appreciation judging rather than the written standard. ↓





Orchid of the Year ↑

***Phal.* Sylvania Fair 'Doris Lanyon', AM/AOC-VOC**

The grace and symmetry of this *Phalaenopsis* raceme demonstrate the perfection reached by hybridisers in this genus. The cross was made by Mr Alvin Bryant and registered in 1981 by Parade Orchids. Mr B. Lanyon nurtured it to perfection. Congratulations Mr Lanyon.

l plants



***Milt.* Carpinteria 'Dundas',** →
HCC/AOC-NSW

Parents are *M.* Iseri x *M.* Franz Wichmann, a *Miltonia* cross registered by Dr Howard Liebman of California in 1980. This clone just missed out on an AOC Award of Merit. Grown by Mr H. Sheaves.

Acknowledgments to the official Award photographers of each State.



← ***Cym.* Rincon Fairy 'Pink Perfection',**
HCC/AOC-OCSA

This was about the last of the famous Greenoaks *Cymbidium* crosses to be registered (1975). It is from *C.* Fairy Wand x *C.* Rincon. It typifies the floriferousness and colour breeders of minicyms and intermediates are striving to obtain. Note the dominance of flowers over foliage. Grown by Adelaide Orchids.



↑ ***Cymbidium* Jubilation 'Good as Gold',**
AD/AOC-VOC

The plant had two racemes with nine and ten flowers. It is typical of many outstanding clones in a wonderful crossing of *C.* Wallara 'Gold Nugget' and *C.* Borough Green 'Conference'. Grown by its hybridiser Mr Ron Hodgins.

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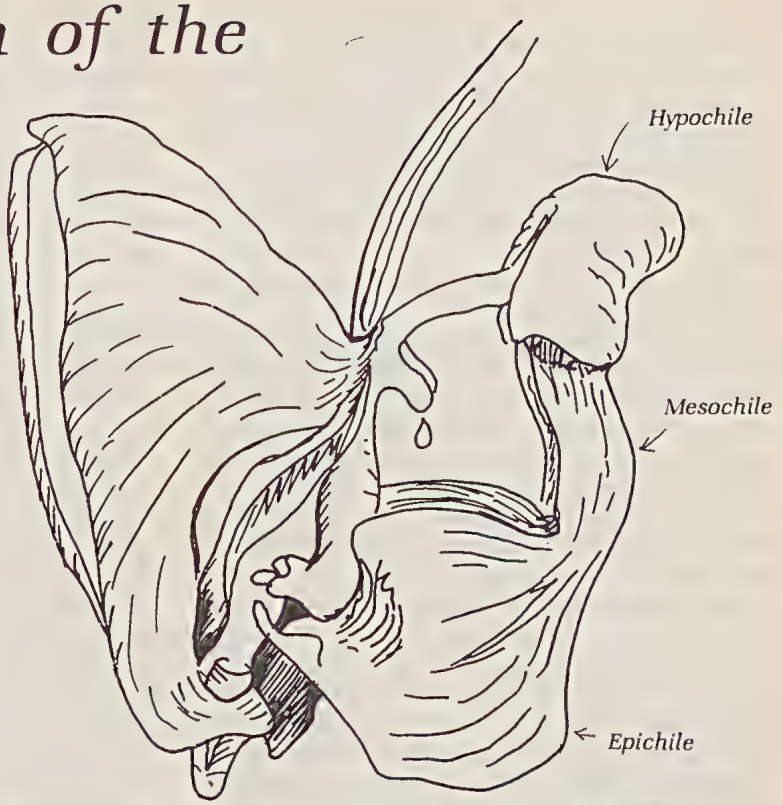
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The Emblem of the Orchid S.P.E.C.I.E.S. (N.S.W.)

WALTER T. UPTON



Coryanthes speciosa Hook

TERMS USED

Epichile. **Pronounced Ep-i-kyle. The end part of the joined lip of orchids such as stanhopeas, gongoras and coryanthes.**

Hypochile. **Pronounced HYE-po-kyle. The basal part of a compound labellum.**

Mesochile. **Pronounced MES-o-kyle. The middle part of the labellum where it is in three notably distinct parts as in stanhopeas, etc.**

Myrmecophilous. **Pronounced mer-me-KOFF-ill-us. Ant loving; inhabited by ants.**

Species societies are booming. They are becoming noted for promoting expertise in culture, and for emphasis on accuracy in nomenclature. The N.S.W. society is known as Orchid S.P.E.C.I.E.S. (N.S.W.) the initials standing for Society for Propagation, Enjoyment and Culture of Indigenous and Exotic Species (N.S.W.).

Orchid S.P.E.C.I.E.S. (N.S.W.) has adopted *Coryanthes speciosa* as its emblem. Here Mr Walter Upton explains why.

Readers will remember the fine article in the issue of last June by John Woodward of Tasmania in which he recounted his experiences in growing *Coryanthes speciosa*. These two articles show it can be grown with ordinary care and knowledge of its needs. Read this, re-read John's June issue article, then it will be safe to buy a plant of *Coryanthes speciosa*.

When choosing a floral emblem for a Species Society I consider it should, among other things, be a flower that will create discussion, and at the same time be a worthy representative of all orchid species.

Coryanthes speciosa has both these factors and many more. It is a very beautiful flower, in its own intriguing way, it is most complex, its pollination by bees is extremely remarkable, it has a wide area of distribution, the plant has a strange association with ants in its native habitat, it was first described in 1831 etc, etc.

Let's have a closer look; — Firstly at the genus *Coryanthes*.

***Coryanthes* Hooker.** The genus was first described by Sir William Hooker in the Botanical Magazine in 1831.

The name is derived from the Greek *korys* (helmet) and *anthos* (flower), one presumes in allusion to the shape of the lip epichile.

In the *Orchids of Guatemala* it is stated "Epiphytic in dense tropical forests up to 1,000 metres altitude".

Distribution — Mexico to Brazil. The large flowers are pale yellow to straw coloured. The

hypochile yellow to orange. The epichile yellowish/brown with reddish brown spotting inside "bucket".

My plants flower in late September early October, the flowers lasting four days.

There are approximately twenty species in the genus and they are to be found from Mexico through Central America and the West Indies to Brazil and Peru.

They belong to the Tribe Vandae Sub-Tribe Gongorinae.

The inflorescence is pendulous, the flowers are large and showy. The lip is divided into three parts, a hood-shaped hypochile above, the mesochile arising from within the hypochile and the epichile in the form of a bucket or upturned helmet is pendant from the mesochile.

There are two faucet-like organs at the base of the column which drip water into the bucket (epichile).

The epichile is partially filled with water during the few hours before the flower opens and for a short while afterwards. Pollination is effected by bees who are attracted to the hypochile by its strong odour, they scratch at the hypochile and eventually fall into the water filled bucket, (do they become drunk from the substance beneath the tissue of the hypochile?) Because they are wet and the walls of the epichile are slippery, the only escape route is through the tunnel formed by the column, which is sharply reflexed at its apex, and the apex of the epichile. As the bees crawl out they brush past the anther and the pollinia are deposited on their body. They return to the hypochile of the same or another flower, repeat the process, this time depositing the pollinia in the stigmatic cavity.

As regards the habitat, I quote from P.H. Allen, writing in the *Flora of Panama* "They usually occur as a conspicuous element in the unique arboreal myrmecophilous gardens, in the nest of ants of the genus *Camponotus* and *Azteca*, the association often including a purple or orange-flowered, erect, tufted *Epidendrum*, and several apparently specialized succulent-leaved non-orchidaceous plants . . . "

Culture. In George C. Kennedy's article on the genus *Coryanthes* in the Orchid Digest Vol 42 No 1 he states.

"Dr J.A. Fowlie is to be credited with discovering the secret of successful artificial cultivation of *Coryanthes*. He found that when potted in Palco wool and kept exceedingly wet, they thrive and grow beautifully. The reason seems to be fairly obvious. Palco wool is made from the fibres of bark of redwood trees and has a pH of approximately 3. The ants' nests on which the *Coryanthes* grow are loaded with formic acid . . . "

I grow my plants in half Palco wool and half pine bark and they are growing very well.

Winter:	Minimum temperature 15°C
	No food
	Compost moist but not wet
Growing Period:	Good humidity
	Temperature 20-25°C
	Moderate Shade
	Ample Water
	When growth is complete ease off with water.
Feed:	30-10-10 weekly when growing
	10-20-10 when buds begin to form
Containers:	Wire or slat baskets, so that flowers may hang freely.

Historical note re hysterical bees

An account of the fertilization of coranthes flowers was given to the Linnean Society of London in 1865 by Dr Cruger as follows:

"Large humble-bees, noisy and quarrelsome, are attracted at first by the smell of the flower; but the smell probably only gives notice to the insects; the substance they really come for is the interior brim of the labellum which they gnaw off with great industry. They may be seen in great numbers disputing with each other for a place on the edge of the hypochile. Partly by the contest, partly perhaps intoxicated by the matter they are indulging in, they tumble down into the "bucket" (epichile) half-full of the fluid secreted by the horn-like organs at the base of the column. They then crawl along the interior inner side of the bucket where there is a passage for them. If one is early on the look-out, as these Hymenopters are early risers, one can see on every flower how fecundation is performed. The humble-bee in forcing its way out of its involuntary bath has to exert itself considerably, as the mouth of the epichile and the face of the column fit together exactly, and are very stiff and elastic. The first bee that is immersed will have the gland of the pollen masses glued to its back. The insect then generally gets through the passage and comes out with this peculiar appendage, and returns immediately to its feast, when it is generally precipitated a second time, passing out through the same aperture, and so inserting the pollen masses into the stigma while it forces its way out, and thereby impregnating either the same or some other flower. I have often seen this, and sometimes there are so many of these humble-bees assembled, that there is a continual procession of them through the passage specified."

"Who would have been bold enough to have surmised that the propagation of a species should have depended on so complex, so apparently artificial, and yet so admirable an arrangement?"

— Darwin.

Interesting new hybrids

Some hybrids registered over the past twelve months have particular interest for Australians. One because it is a unique world first. Others because they concern significant aspects of Australian orchids.

Sladeara Kenneth Russell. Named by Phil Spence Orchid Productions. This new intergeneric hybrid genus honours Mr Hermon Slade. The grex name honours its creator Mr Ken Russell. It is a cross of *Doritaenopsis* Dungog and *Sarcochilus hartmannii. Dpts.* Dungog is a scion of *Phalaenopsis* Aalsmeer Rose x *Doritis pulcheerima,* a cross made by Ken Russell and registered by Phil Spence.

The potential would appear to be of twenty cent coin size flowers of good shape and pink in colour with a few whites.

Luichilus Rumrill Maverick is a cross made by Mr James Rumrill of Towaco, USA and registered in December, 1982. One of its parents is *Sarcochilus hartmannii.* The other parent, *Luisa teres,* is also of the Saranthinae sub-tribe. The latter is a terete leafed species with a few flowers to a node. Although not likely to reach Australian collections just yet it is a pointer to the compatibility of *Sarcochilus hartmannii* with other vandaceous genera.

Diuris Pioneer. First hybrid registration in this genus. It is from a cross of *D. maculata* and *D. longifolia* made by L. and M. Nesbitt of SA.

Other interesting Australian crosses. Mr Roger Bedford has registered the cross from *Sarcochilus hartmannii* and *Phalaenopsis mannii* as *Sarconopis* Florence.

Mr David Cannon has given the name *Dendrobium* Gracious Cascades to a crossing of *D. speciosum* and *D. gracillimum.* Also *D.* Kim Heinze from *D.* Blushing Star x Hilda Poxon, and *D.* Peach Star to a cross of *D.* tetragonum and *D.* Hastings.

Hybridisers of Australian orchids have been really active. Mr Walter Upton has registered six hybrids this year. They are: *Den.* Peter Hewitt = Hilda Poxon x Hastings. *Den.* Harold Hirsch = Suffusion x *speciosum. Den.* Jombock = Judy Leroy x Colin. *Den.* Nunkumbi = *tetragonum* x Eureka. *Den.* Warrambool = Ellen x *falcorostrum. Den.* Wirruna = Hilda Poxon x *fleckeri.*

Mr Phil Spence has been super active, having registered nine crosses in the nine months to September 1983. *Den.* Aussie Angel = Aussie Ira x *bigibbum.* Aussie Freckles = Suffusum x *falcorostrum.* Aussie Mist = Peter x Bardo Rose. Aussie Ochre = *agrostophyllum* x *speciosum.* Aussie Starlight = Aussie Ira x *speciosum.* Aussie Sunshine = Peter x Eureka. Aussie Cascade = *pugioniforme* x *beckleri.* Aussie Bonanza = Aussie Ira x *falcorostrum.* Aussie Glow = Aussie Ira x *fleckeri.*

Two worthy crosses have been registered by Graeme and David Banks. These are *Dendrobium* Essie Banks from a mating of *D.* Hilda Poxon and *D. speciosum,* and *D.* Lynette Banks from *D.* Eureka and *D. speciosum.*

Several dendrobium crosses have been named by Mr Ken Macpherson of Proserpine, mainly with New Guinea parentage. Two of his crosses made with *D. canaliculatum* as the donor are particularly interesting. They are Son of Gloucester with *D.* Peter Petersen as pod parent, and Maid of Gloucester, with *D. tangerinum* as the pod parent.

Mr and Mrs W. Cannons have produced a cross which could be full of surprises, namely *Den.* Rosella, a product of *D. tetragonum* and *D.* Peewee.

Special Ira Butler Awards

Ira Butler Awards are controlled by a committee appointed by the Orchid Society of NSW and the Australasian Native Orchid Society. Purpose of the awards is to perpetuate the work of the late Ira Butler and to encourage others to carry on his work.

Ira was one of the foremost native hybridists of his time. He reasoned that improved hybrids would help conservation of wild orchids since no one would have any incentive to take them illegally.

As well as providing a trophy for Australian Native Hybrid of the Year, and trophies for the champions at major native shows, the committee also makes Awards of Special Recognition to anyone who has made a contribution to hybridising.

Two such Ira Butler Awards were presented at the November meeting of the North Shore Orchid Society (NSW). One was to Mr Phil Spence for his major contributions to native hybridising. Many of his crosses are into the third generation.

The other award was to Mr and Mrs Noel Jupp of East Gresford, NSW, who have a long list of native crossings to their credit. Reference to some of the latest registrations of native crosses is made elsewhere in this issue.

Nominations for Native Hybrid of the Year are now being processed. Details of the winning clone will be published in the March, 1984 issue.

"Unless the flowers of orchids were by some means rendered attractive to pollinators they would be cursed with perpetual sterility." — Darwin.

Eighth Australian Conference

Many regular conference goers went home saying that the Eighth Australian Orchid Conference had to be the best yet. That's a proud claim, but certainly no one could do anything but acclaim the superb organisation, the wonderful show, and the excellence of the lecture programme.

It was unique for an orchid conference to be held outside a capital city. For the first time the Australian Orchid Foundation played an important part in proceedings, and the first time a whole day was devoted to Australian orchids.

There were 266 registrants, more than half of them from other states and overseas.

The weather was not too hot, the scenery of sea and forest excitingly different, and the socialising stimulating.

Cocktail Party and Reef Dinner merged into one long evening of chatter and laughter. The banquet a happy affair indeed. The farewell barbecue possibly the best of all because of its informality and furthering of friendships.

A terrific climax to the conference came when Townsville President, Ray Robinson asked Gerald McCraith to accept a cheque for $1,500 towards AOF funds.

Conference lectures. Kew botanist Dr Phillip Cribb delighted everyone with his lucid descriptions of his work at Kew. "Kew", he explained, "is the Interpol of the botanical world."

Dr Cribb has established that the Dendrobium section name Ceratobium, under the rule of priority, must lapse because it was earlier named Spatulata. No doubt the International Orchid Commission will ratify this at its meeting in March, 1984.

Our overseas speakers, John Miller, "Doc" Charles, and Frank Shride gave a wonderful updating of world developments with phalaenopsis, paphiopedilums, and cattleyas.

Australian hybridisers showed that we were not behind in our own specialities. Wal Upton showed the astounding progress made with native hybrids. Kev McFarlane, his work with hybrids of *Vanda* and *Phalaenopsis*.

There was wonderful material on Papua New Guinea from the Rev Canon Cruttwell, and botanist Neville Howcroft. Fascinating Peter Lavarack and the Rev Dr Ron Collins spoke on the ecology and history of northern Queensland.

Particularly fascinating were two papers on plant physiology of marked value to orchid culture. These were given by Geoff Stocker and Ben William. Ben has recently received his PhD for work on the water conserving device whereby many succulent type plants, including some orchids, absorb carbon dioxide at night instead of during daylight.

Papers on conservation were given by Prof Rapee Sagarik of Thailand, and Dr Stephen Hopper of WA.

Proceedings available. A book on the above papers is available. It is illustrated in colour and pen drawings by Mair Swann. Cost is $10, plus $1 packing and postage. Send to The Townsville Orchid Society, PO Box 83, Townsville, Queensland, 4910.

Eighth Conference Show

Undoubtedly Australia's most important orchid show in 1983. All who participated could feel the enthusiasm. To North Queenslanders it was a revelation as to what they could achieve, also a chance to see those genera which prefer cooler climates. Conversely, southerners saw just how well grown vandaceous and hardcane orchids are grown in the tropics.

It was a surprise to find such a beautiful specimen of *Oncidium splendidum* and to see it become Grand Champion. All credit to master grower Kev McFarlane.

Stan Condon of Pathfinder Orchids set up a magnificent display of paphiopedilums, a novelty relished by northerners. One of these *P.* Personella 'Lil' was Reserve Champion.

John Hughes possessed the Champion Cattleya, the lovely white *C.* Bob Betts 'The Virgin'.

Cymbidium Champion was also a white, *Cym.* Noarlunga 'Enfield', grown by Mr and Mrs Godfrey. Other Champions were *Phalaenopsis* Running Water, K. McFarlane; Phalaenanthe type Dendrobium, *Den.* 50th State x Hickham Deb 'Wallcrest', *D.* Hampton; Ceratobium type, *Den.* Sri Siam, K. McFarlane; and Nobile type, *D.* Yukidaruma 'King', L. Napper.

Champion Vandaceous was won by *Vanda* Ophasun, E. Hielscher; Champion Native, *Den. canaliculatum*, R. Mayoh.

A huge pot of the jewel-foliaged *Ludisia discolor*, owned by W. Nicholson, was Best Specimen Plant.

Floral Art was a big section which proved a crowd pleaser. In one division the Champion was Beryl Golding; in the other Gwen Olsen.

Display winners. The society and individual displays were admired by a constant stream of visitors. The most distinctive display was Mr D. Hampton's "Under the Mango Tree", a clever arrangement of branches and foliage surrounded by orchids.

Class I was for a display by a member of the Tropical Queensland Orchid Council. It was won

by Townsville, with Ayr and Mackay second and third.

Class II for other Queensland societies was won by Gladstone. The display featured a "sun" of golden cattleya blooms from which ribbons radiated like beams casting light upon the lovely blooms beneath. Rockhampton came second with a display of quality blooms around a treasure chest containing three plants of *Slc.* Jewel Box 'Dark Waters'. A display by the Sub-Tropical Orchid Council came third.

Class IV was won by the Gold Coast Orchid Society, with NSW second, and the South Coast OS of SA third.

Singapore and Bangkok contributed to the gaiety with great masses of strongly-coloured vandas and dendrobiums.

Conference people

Sandy Goldsmith moves around like a wisp. Anyone else her size would pass unnoticed. But not Sandy. She was one of the dynamos of the conference.

As secretary of the Host Society she played a big part in its organisation and seemed to be on hand, bright and smiling, wherever needed.

Ray Robinson, as president of TOS put up a solid performance during the two years of conference organisation. During the conference his affability and social mixing kept everyone at ease.

Peter Pavia was a major sponsor of the conference, contributing over $2,200 and inducing Pacific to back the photographic competition. Being a chemist he has taken to asymbiotic flask culture like a looper to your best bud. He and Ray Robinson are now setting up to sell flasks, including mini-flasks, and there is now quite a store in Peter's lab.

Peter and his good wife put on a wonderful evening's entertainment for members of the Australian Orchid Foundation. Thank you to both. Everyone enjoyed that night.

Ted Boon mightily performed that most arduous of tasks, Eighth Orchid Conference secretary. Without neglecting his huge orchid collection too, for it was beautifully laid out and not an unhealthy looking plant anywhere. He would have possibly the largest collection of miniature oncidiums in Australia. Not only that but the best collection of orchid stamps too. Barry Collins drooled when he saw it.

Rosemary Bromwich has been a mainstay of the Orchid Society of the Northern Territory since it was formed. Isolation is the problem of growers up Darwin way and Rosemary really revelled in the chance to talk orchids with folk from everywhere.

Darwin growers have had a lot of help from Singapore nurseries. Singapore is only a couple of hours flying time away and consequently vandaceous and hardcane orchids are now the backbone of Darwin collections.

Rosemary adventured with Andree Miller and Madge Purnell on a trip up the Sepik River a couple of years ago. Found the May River Red too.

Madge Purnell spent many years in Lae, New Guinea and learnt to love and grow PNG orchids. Retiring to Mackay she brought many of them with her. For many years now she has been raising their progeny under immaculate conditions and selling them under the trading name Ceratobe Orchids.

It came as a shock to learn from Phillip Cribb that the name Ceratobium had been preceded by the name Spatulata. Guess we can all feel sorry about that name change. Ceratobium always seemed just right. But it's doubly tough for Madge.

John Leeder of South Aussie and Lister Arrowsmith of Townsville have a lot in common. They were both at the conference, they both grow orchids well, and they both served in Lancaster bombers during the war. They first met during Garden Week in Adelaide where John helped construct a massive orchid display for the South Coast Orchid Club.

Tom French and his wife Pat were among the New Zealanders at Townsville. Tom led one of the show-judging panels. He hails from New Plymouth and is well known as Founding President of the New Zealand Orchid Council.

Ken Lloyd and his wife Rosemary are established conference goers. Other regulars would feel lost should they fail to turn up. At Townsville they were bright as ever, and talking about being at Miami too. One must agree with them: a conference is the best way to have a super holiday.

Ron and Phyliss Merritt maintain a huge collection of orchids and foliage plants at their Aitkenvale home. Keeping it looking in such good order must be nearly a full time job. How did Ron manage to find the time to do all the work of Marshal for the conference show?

It was good to see Alick Dockrill taking such an active part in the conference. His paper on the life and influence of Rudolf Schlechter was a gem of research. Alick traversed a lot of the area visited by Schlechter during the period he was curator at the Lae Herbarium.

BOOK REVIEWS

The *new* Schlechter

The revision of Schlechter's *Die Orchideen,* under the direction of Dr F.G. Brieger and published by Paul Parey of Berlin, has now reached its thirteenth part.

Parts 11 and 12 dealt mainly with a revision of the genus *Dendrobium* in which several new genera were created by splitting. These changes in classification affect markedly a great number of New Guinea and Australian species. A brief outline of these was made in the last March issue.

This revision is now under extensive examination by world authorities, including the Research Committee of the Australian Orchid Foundation. This magazine will report results of these determinations as they occur.

Part 13 deals with the subtribes Bulbophyllinae and Sobraliinae. The first is a huge conglomeration of genera with well over a thousand species; the second a small group of about a dozen species.

A start is also made on the subtribe Liparidinae. The genus *Liparis* has about 400 species and is distributed worldwide, and *Malaxis* would have even more species. Dressler prefers the name Malaxideae, rather than Liparidinae, for this subtribe.

The Bulbophyllinae is without doubt the largest orchid subtribe. It contains great morphological diversity, particularly in scent. Excellent photographs show this diversity. Witness such genera as *Hyalosema* with its foldover dorsal (page 768) and *Cirrhopetalum* with umbellate raceme (pages 772-773). It is interesting that the latter is given full generic status.

This up-dating of Schlechter under the direction of Dr F.G. Brieger is being published in twenty parts. It is in German but may be followed by non-German readers who have some knowledge of orchid technical terms and a German dictionary.

Serious orchidologists will find it a necessary part of their library. For information on back issues and prices for ship or airmail despatch contact the publishers: Verlag Paul Parey, 1 Berlin G1, Lindenstraffe, Germany.

Helpful garden books

The following books are readily available in bookshops. They are distributed by ANZ Book Co Pty Ltd, PO Box 459, Brookvale, NSW 2100.

Orchids as Indoor Plants. Brian and Wilma Rittershausen. Blandford Press. Very useful for the unit dweller or grower for home decoration. Tells how to choose suitable orchids and how to care for them. Many drawings plus photos in black and white and colour. A nice gift for the little lady who likes to grow indoor plants. Recommended price $7.95, soft cover.

Growing Plants Without Soil. By Hans-August Rotter. EP Publishing. A beautifully produced book. It shows how to grow hydroponically the foliage plants that go so well with orchids. Some of these methods can be applied to orchids. Cattleyas in particular respond well to such culture. Many colour illustrations and line drawings. Recommended price $21.95, hard cover.

The Rock Gardeners' Handbook. Alan Titchmarsh. Published by Croom Helm of London and Canberra. Rock gardens are a pleasant antidote to the squareness of orchid growing houses. This book explains construction and care and gives a detailed list of plants and their needs.

The range of genera allows for dwarf to large scale landscaping. There is a useful section on growing alpine plants under glass. Also a bibliography and list of common names. Well illustrated by drawings and colour plates. Recommended price $17.95, hard cover.

Growing Chrysanthemums. Harry Randall and Alan Wren. Croom Helm. A very complete guide to these wonderful plants. Many drawings and colour illustrations. A list of chrysanthemum societies reveals that there is one in Melbourne and one in Sydney. Recommended price $17.95, hard cover.

Waterlilies. Philip Swindells. Croom Helm. Every orchid grower with a decorative pond in the garden will benefit from this book. If you haven't a pond the book will show you how to construct a pleasing one. Should you not have it in mind to build a pond, the beautiful colour illustrations in this book could convert you. Recommended price $17.95, hard cover.

Growing Fuchsias. K. Jennings and V. Miller. Croom Helm Ltd. Starts with the interesting history of these plants, then rapidly gets into the business of selecting plants, propagating, growing and hybridising. Fuchsias make excellent subjects for potting and hanging baskets for patio settings. They do well in greenhouses. There are societies in Adelaide, Auckland, and Christchurch. Recommended price $11.95, soft cover.

Cacti and Succulents. Gunter Andersohn. EP Publishing. A definitive book on the subject. The extraordinary adaptations of these plants match those of orchids. Many orchid growers seem to have from a few to a lot of these fascinators. This book tells all they need to know about natural habitat and culture in the garden, greenhouse, or indoors. There is a section on hydroculture. Just dozens of beautiful illustrations. Recommended price $24.95, hard cover.

Easy Composting. Vic Sussman. Rodale Press, USA. An excellent book for the organic gardener, and isn't that the most efficient way to garden? It tells you how to compost vegetation to soil in two weeks, and how compost affects soils. You can learn a lot about nutrients from this book. Recommended price $10.95, soft cover. Also available in hard cover.

More on green fibreglass

The Editor,

I have been a subscriber to your excellent periodical for a good number of years and have enjoyed your articles. However, I feel that I must comment on your article which appeared in the June 1983 issue of the *Australian Orchid Review*, entitled *Don't use green fibreglass.*

I have been growing orchids for the past twenty-three years and have used pale green fibreglass on a leanto greenhouse facing east for the past twenty years with good results.

As my collection increased, I constructed a shadehouse in front of the greenhouse to accommodate the excess plants, where adult cymbidium plants were benched and soft-cane dendrobiums were hung. The cymbidiums continued to grow well with good spike formation; however, the spikes were noticeably stockier than the ones in the greenhouse and the flowers were smaller with shorter stems — this gave the spike a bunching effect. The soft-cane dendrobiums grew well, but the new canes were shorter and thicker than the ones of the same clones hanging in the greenhouse, with smaller flowers on short stems and less flowers to each cane.

The cymbidium plants that were moved into the pale green fibreglassed greenhouse developed their flower spikes well and were much longer than the ones in the shadehouse. The flower spacing on the racemes were improved with fuller, well developed segments.

The soft-cane dendrobiums that grow in the greenhouse have taller canes with longer spacing between the nodes which prevent the flowers from bunching up. They flower well, with two to four flowers on each node and more nodes produce flowers than the ones that grow in the shadehouse.

I normally don't show my plants, but my wife induced me to bench *Dendrobium* Sunburst 'Elizabeth Ann' on the novice area at the September 1981 V.O.C. meeting and the plant won the novice prize, the popular vote, the judges vote and a Certificate of Cultural Commendation; breaking the record of the V.O.C. Club. The same plant was exhibited the following year at the V.O.C. Spring Show and won the Australian Orchid Council Pre-Eminent Trophy. This plant has been growing, hanging in the pale green fibreglassed greenhouse for many years, with obviously good results.

It appears from my experience in using pale green fibreglass on the roof of the greenhouse that there is an improvement on the length of cymbidium racemes, with better quality flowers and the soft-cane dendrobiums grow taller canes and flower better under the same conditions.

There is one point of criticism on green fibreglass — it seems to have a shorter life span than clear fibreglass and needs replacing every fourth year. I feel that if it's painted with a clear ultra-violet inhibiting resin, it could extend the life span of the material.

Before one condemns the colour "green" on fibreglass, possibly more research is needed on the shade of green. Perhaps it is possible that a slight reduction on the red and blue wavelengths of light at certain periods of the year could enhance the performance on some orchids.

Yours faithfully,

Chris Karamitsios
17 Orrong Road, Elsternwick, Vic. 3185

Further comments invited

Editor's comments. It is gratifying to publish such a thoughtful comment on the June article *Don't use green fibreglass.* Such discussion can only improve knowledge of culture. Further observations by growers will be welcome for publication.

It will be noted that Mr Karamitsios mentions that his green fibreglass is "on the roof of the greenhouse" (third last paragraph) and thus white light may be available from the sides.

Also he stresses "pale green fibreglass" (second paragraph). The amount of pigment in a pale green medium is widely distributed and thus a relatively large proportion of the light spectrum may be transmitted. However the frequencies so transmitted are not likely to be in optimum balance, that is in the same ratio as in daylight.

It is possible that a coloured fibreglass or coloured glass may produce a tolerable, even favourable, microclimate for some species, but this will be a matter of luck rather than conscious control by the grower.

Some genera, and some species or hybrids within a genus, will have lower light needs than others and thus may not be greatly affected by the loss of some parts of the light spectrum.

A plant's light needs may be influenced by whether it flowers in response to long nights or short nights. The former are referred to as short day plants, the latter as long day plants. Orchids include genera using both types of photoperiodism. Thus any disproportionate filtering of available light may shorten apparent daylight and may subdue or stimulate flowering, depending on the genetic characteristics of the plant.

If the blue part of the spectrum is subdued a disproportionate amount of red can prevent flowering of short day plants and could promote flowering of long day ones. Disproportionate blue will have a similar but less marked effect.

Experiments have taken place in which plants were grown in different coloured lights. Identical seedlings become markedly different as they matured. Those grown only in completely red light became elongated and weak, those in blue light grew as dwarfs. Green light plants weakened and wilted.

Much research has been done in recent years on short and long day plants. Some flower crops can be controlled by lights to produce at economically advantageous times. Work on short and long day plants is being carried out by Arditti and others but the field is still hardly touched upon. Accordingly it is difficult to assess precise light requirements for every horticultural orchid. The best plan is to study the light conditions a genus or species receives in nature. With this knowledge, plus careful observation of their plants and studying the techniques of successful growers, most hobbyists manage very well.

The safe course, as the June article recommends, is to avoid complicating culture by introducing unknown or uncontrollable factors. Green fibreglass does just that by affecting the amount and quality of light reaching the plants. This reduces the number and quality of microclimates capable of being created in a growing house.

With most orchids any deleterious effect from light imbalance is slow and may not be noticed for years. Or other reasons may be blamed for a plant's decline, particularly if other plants under the same conditions are apparently doing well.

Clear fibreglass or glass can easily be covered by any percentage of shadecloth and the light allowed through is still in the same spectrum ratio as full light.

Local manufacturers or distributors of fibreglass have nothing to say in their literature regarding the horticultural aspects of their products. However I have heard that a Japanese manufacturer has done considerable research on this matter. Can any reader provide the name and address of this firm?

Ronald Kerr

S.P.E.C.I.E.S. Meeting Night

Orchid S.P.E.C.I.E.S. (N.S.W.) meets third Wednesday of month, first floor, Castle Hill Community Centre, corner Old Castle Hill Road and Old Northern Road, Castle Hill. Visitors are most welcome. The society produces a monthly newsletter and a quarterly gazette. Honorary secretary is Mr R.J. Terbutt, 33 Joanna Street, South Penrith, 2750. Phone (047) 36 2230.

Observations of an amateur

E.R. BENNETT

A Father's Day gift of a cymbidium "unknown", given because "dad liked flowers" was my introduction to orchids. With experience I learnt that its name was *Cymbidium* Sussex 'Laelia Sasso'.

Since that gift time, I have developed a seemingly incurable disease, the major symptom of which is to obtain more and better orchids.

At times the disease has proven expensive, because in spite of the written and verbal advice of experts, I continue to kill my plants. This is because advice to a beginner can seem contradictory and confusing. Failures resulting this way can be heartbreaking.

I know it to be true that orchids are hardy and that all you have to do is find the right conditions and place, in order to have them thrive.

I have, of course, joined a society and read orchid books and magazines, but one author or speaker will advise a procedure which seems directly opposite to another.

Eventually one has to use his brains and observe. A sick plant will tell you so, and in most cases it is cold or wet, or both.

From my own observations and experience I have established the following growing methods.

Watering. I keep all but very cool growing plants reasonably warm and dry in winter. Any plant with bulbs should have a dry period which coincides with that in its natural habitat.

When new leads start reaching out watering should be increased **gradually.** By mid summer most species can be watered every day.

As soon as new leads have attained full growth cut back on water and start a drying out period. However see that plants without bulbs never dry out.

Compost. I have seen many orchid mixes advocated and tried many of them. I agree with these growers that what they are using is best for them, but some of these mixes have resulted in the loss of plants for me.

I now use 60% of coarse river sand, plus 40% raw softwood shavings, and so far have had the best growth and flowering ever.

I fertilise at quarter strength whenever I think of it. Sometimes with a ration of blood and bone, sometimes with Nutricote. Occasionally with a dose of epsom salts or Formula 20, or whatever.

My mix has been right for me. I use it for cymbidiums, dendrobiums, cattleyas, brassias, and others. Not completely orthodox I suppose—but then I'm an amateur and still observing and learning.

P.O. Box 186, Long Jetty 2261

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Check the Show Winners

The QOS Warana Show

FRANK OELKERS

The Queensland Orchid Society held its 1983 Spring Show in the auditorium of the Kelvin Grove High School, September 23-25. Eight societies graced our show with fine displays.

Once again the blue ribbon for large area display was taken out by the Pine Rivers Orchid Society. This young society may well be very proud of its recent achievements.

Phaius tankervilliae dominated their fine display as it towered over equitant oncidiums, dendrobiums, vandas, cattleyas and many other "close relatives and friends".

Dendrobium Utopia 'Giant', one of the better shaped softcanes, must have contributed much to the high points, for quality awarded to this society. Another nice softcane on display was *D.* Glorious Rainbow x Anne Marie. Thoughts harked back to my early orchid growing days when I noticed a plant of *Vanda luzonica* on display. I wonder how many are still growing in the wilds on Luzon today?

North Albert and District Orchid Society displayed some quality blooms. *Lc.* Culminant 'La Tuilerie' and *Cymbidium* San Francisco 'Meadow Mist' were two that caught my eye. Softcane *Dendrobium* Highlight 'Buttermilk' was a picture and should have given its grower much satisfaction. This show stopper carried about 150 intense yellow blooms that were well displayed on several sturdy canes. A very fine plant of *Cymbidium* Sensation 'Chianti' bore several very rich dark blooms.

Full marks to the Orchid Species Society for choosing the very apt theme "In the Beginning" for their contribution. This display exhibited many of the species that "In the Beginning" imparted their desirable qualities to our modern hybrids. I noticed in this display a dainty *Vanda coerulescens* with its smallish mauve-blue blooms. *Dendrobium nobile* var. *cooksonii*, *D. nobile* and the variety, *virginale*, were just some of the softcanes on display. A multi-flowered specimen of *Cattleya intermedia* was a picture.

The Native Orchid Society featured a massive *Dendrobium beckleri* that reached down about 1.5 metres. Many of our favourite natives were on display – *Dendrobium* canaliculatum, many species of the genus *Dendrobium kingianum, delicatum, linguiforme, speciosum, teretifolium*, and I noticed a plant of *Eria queenslandica*.

"Everything is beautiful in its own way" was the theme chosen by the Brisbane Orchid Society for their colourful display in which a miniature grand piano was one of the props. Two desirable white phalaenopses – one with a coloured lip – and a classy pink one dominated this prize winning display. Fine standard and mini-cymbidiums certainly did much to keep things in tune with the theme.

Cymbidium Burgundian 'Bexley' and Novelty *Cymbidium* Sunshine Falls 'Green Fantasy' were just two of the many desirable plants featured on the North Brisbane Orchid Society's display.

Stuart Heyden's *Phalaenopsis* Comtesse Gabi was awarded Champion of the Show also the most preeminent entry. The judging panel also awarded it with a HCC. The 24 award shaped pink blooms were carried on a branching spike that arched gracefully and displayed the magnificent blooms to perfection. *P.* Comtesse Gabi is a modern hybrid registered in 1980 by an orchid grower in West Germany. The six leaves of this massive plant each measured about 45cm by 10cm and indicated spot on culture at Stuart's place.

Dendrobium Joy Nevins exhibited by M. and F. Wheeler was awarded Reserve Champion. Four upright spikes, each carrying about 30 yellow tipped blooms, graced this elegant ceratobium type dendrobium.

Alan and Joyce Ryan tabled the Champion Specimen of the Show in natural hybrid *Bc.* X Lindleyana 'Joyce'. Alan and Joyce are very successful orchid growers and exhibitors, this being manifest by the many, well cultivated specimen plants that they exhibit. *Bc.* x Lindleyana, with its 134 blooms, was much admired and received very favourable comment.

The Champion Cattleya *C.* Tiffin Bells 'Orchidglade', L. Vickers.

The Champion Native Orchid *Dendrobium linguiforme*, R.W. Moffat.

The Champion Cymbidium *Cym.* Westgate Bridge, J. Heath.

The Champion Novice Cattleya *C.* Carl Hausermann, E. Marshall.

Equitant *Oncidium* Iffy 'Kuran', exhibited by J. and M. McCubbin, was awarded first in its class. In my opinion one of the most desirable Equitants around. Colour burgundy mauve. Shape almost perfect.

The colour, shape, substance-texture and floriferousness of our beloved orchids have improved dramatically over the years. This was evident at the show and other affiliated society's shows, where many fine hybrids were tabled.

As the QOS nears its Golden Jubilee year 1984, perhaps we can spare a kind thought for the great men who guided our society through the early years. They never enjoyed the sight of our modern complex hybrids but derived the ultimate in enjoyment from the sight of primary crosses, species and the then little known natives.

They could buy Indian dendrobiums for about three shillings and sixpence each too.

TOOWOOMBA OS SPRING SHOW

The lovely pastel *Cymbidium* Valley Conquest 'Peach Bloom' was Champion Cymbidium Section, and Show Champion for G. and J. Bloodworth. Mr and Mrs Bloodworth also won Champion Exotic Section with *Dendrobium* Yukidaruma 'The King', and many other prizes.

Champion Native was a magnificent *Dendrobium* Bardo Rose 'Pink Ice' owned by N. and N. Grundon.

Champion Novice went to *Cymbidium* Featherhill 'Heritage', grown by Mr B. Steven.

Cymbidiums dominated the show and the quality was very high. The Darling Downs Group of ANOS arranged a fine native display.

REDCLIFFE DISTRICT OS SPRING SHOW

The society's annual Spring Show, opened by the Mayor of Redcliffe, Alderman R.J. Frawley was held in the Kern Shopping Village, September 8 to 10, 1983. The centre plaza, with its high vaulted opaque fibreglass roof overlooking a paved centre courtyard featuring large gaily coloured planter tubs containing greenery and ornamental trees was an ideal setting for an orchid show.

Five massed displays containing scores of cymbidiums, cattleyas of all types, paphiopedilums, species orchids, and spring flowering native orchids were spaced around the planter tubs with the added colour and fragrance of the Redcliffe City Council's display of flowering azaleas.

Champion Orchid was an excellent *Blc.* Sylvia Fry 'Supreme' exhibited by R. and J. Turner with Reserve Champion going to *Blc.* Malworth 'Orchidglade' shown by Roy Conway. Best Cymbidium was *C.* Caledonian Rose, exhibited by W. Leney Smith. A well flowered equitant *Oncidium* Dee Dee, exhibited by S. and K. Howard taking the blue ribbon for its class.

Other prize winning blooms were a fine white cattleya *C. labiata* x *C.* Snowball exhibited by J. and B. Raddatz and a dainty novelty *Cattleya* Bouton D'or 'Lewis' shown by S. and K. Howard. Other noteworthy prize winners were *Paph.* World Exploit x Personality shown by D. and K. Wanka and two fine *Opsistylis* Mem. Mary Nattrass exhibited by S. and K. Howard and K. and M. Smith. The two *Opsistylis* displayed emphasised the degree of spotting obtained by the use of the different *Rhyncostylis* and *Vandopsis* parents used to make the hybrid cross.

Perhaps the most eyecatching plant exhibited was a fine beautifully grown *Den.* X *delicatum* featuring over seventy spikes of lustrous white flowers. It was awarded first prize for Australian Native Hybrid together with Champion Specimen and Champion Specimen Australian Native Hybrid. This entry was adjudged the most pre-eminent entry in the show and grower Ken Smith took off the Queensland Orchid Society Medallion. Ken said he has grown the plant potted in pure charcoal in rather subdued light for the past eight years and his cultural methods certainly produced a fine plant.

The Society wishes to express its appreciation to the shopping village management for its assistance and for the opportunity to bring before the public the delightful results that can be obtained from growing orchids.

IPSWICH SPRING SHOW

Ipswich Orchid Society Grand Champion was *Lc.* Culminant 'La Tuilerie', grown by F. and K. Rudolf. Reserve went to miniature *Cymbidium* Pee Wee, from Mr D. Dorr.

Best Native was *Dendrobium teretifolium*, grower Mr G. Imhoff. Best Species was *Oncidium splendidum*, grown by L. and M. Heinemann. Novice Prize went to Mr G. Stumer for this clone of the cross *Cattleya* Sirido x *Brassavola digbyana*.

NORTH ALBERT OS SHOW

A fascinating and well laid out show that filled the Oldmac Toyota Showroom at Springwood, south of Brisbane, with beauty.

Champion was *Paphiopedilum* Sheerline 'Rondo', a large green belonging to Mrs Joyce Spence. Reserve went to *Phalaenopsis* Ramona x *P.* Henriette Lecoufle which had six well displayed white flowers, grown by Mr S. Heydon. Mr Heydon also won Best Cattleya with *Lc.* Persepolis.

A novelty cluster cattleya owned by Mr S. McCubbin and named *Lc.* Kingaroy was notable for eight spikes, each with seven or eight flowers of a particularly vivid tangerine colour.

The decorative section was larger than at most shows and the standard of work particularly high.

NORTH COAST OS

The 25th Spring Show of this society at the Sunshine Coast took place over September 8-10 in the Civic Hall, Nambour. Everyone acclaimed it a great success.

Champion of the Show was *Blc.* Ranger Six, owned by Mr and Mrs D. Granger. Reserve Champion went to *Paphiopedilum* World Famous, belonging to G. and B. Robertson.

The Best Speciosum and winner of the QOS Medallion was *Dendrobium* X *delicatum* 'Bluff', grown by B. and C. Anderson. Best Species went to Mr P. Hamburg's beautifully grown *Paphiopedilum hirsutissimum.*

Society displays are always a feature of this event. This year the Sunshine Coast OS were the winners, with Maroochydore second, and North Coast third.

In the foyer was an impressive display of plants in hanging baskets.

GOLD COAST OS SHOW

As usual the Spring Show took place at Owen Park, Southport Showground. In spite of rain, public attendance was very good.

Show Champion was *Paphiopedilum* Landscape, owned by Mr B. Ross. Reserve Champion went to Mr A. Burrow's *Vanda* Blue Nakorn Sawan x *V.* Onomea.

A large plant of *Maxillaria picta,* grown by R. and M. Chippendale, became Champion Specimen.

Blc. Sylvia Fry 'Supreme', belonging to Mr L. McKenzie, became Champion Cattleya. Champion Novice entry was Mr K.G. Jones' *Cymbidium* Pinafore 'Comet'.

NICE ATMOSPHERE AT ROCKHAMPTON SHOW

Held in the St Pauls Cathedral Hall, Brian Maxwell remarks of the show: "the combination of the music, the setting, the Devonshire Teas, and the beautiful blooms creates a wonderful atmosphere, and is an outstanding advertisement for our very satisfying hobby".

Grand Champion was *Blc.* Sylvia Fry 'Wallacia', grown by G. and C. Williams. Reserve went to Mr C. Hamilton's *Blc.* Malworth 'Orchidglade'.

Specimen Orchid went to *Cattleya skinneri,* grown by Mr L. Reeves. The Capricorn Orchid and Foliage Club put on a fine display of Australian orchids.

NSW Spring Show

Roselands Shopping Complex and the Orchid Society of NSW Spring Show complement each other perfectly.

The central court area is large, well lit, and surrounded with attractive shops. There is an atmosphere of elegance which the huge orchid displays enhance.

This year the Grand Champion was *Paphiopedilum* Song Bird 'Pathfinder', grown by Stan Condon. Mr and Mrs J. Gulbis tabled a beautifully flowered *Phalaenopsis* Alice Gloria, the Reserve Champion.

John Mata, who grows cymbidiums with flower stems approaching timber poles, had his splendidly coloured *C.* Burgundian 'Sydney' proclaimed Champion Cymbidium.

Champion Native was *Dendrobium* X *delicatum* owned by Wal and Jill Upton. The white flowers were huge and shapely on erect stems, profusely covering a medium sized plant.

Mr R. Rochfort's flowering of that lovely yellow *Blc.* Malworth 'Orchidglade' gained Champion Cattleya.

Champion Exotic Species was a graceful *Paphiopedilum sukhakulii* grown by Mr and Mrs J. Bygraves. Champion Any Other Genus went to a complexly bred hybrid *Odontioda* Trixero, owned by Fred Alcorn.

Best Standard Seedling was won by a yet unregistered cross between *C.* Mary Ann 'Dr Martin Flood' and *C.* Sensation 'Vieux Rose', owned by D. and M. Krasney. In second place was *C.* Trinity Hall (*C.* Wallara 'Gold Nugget' x *C.* Arcadian Melody 'Harvest') owned by John Mata.

Parramatta OS won Best Affiliated Society Display. All their plants were of outstanding quality and they gained the edge by skilful blending of colours. North Shore in second place also was notable for overall quality. Third and fourth were Sutherland and Eastwood who can always be relied upon to create people-pleasing tableaus. Fifth placegetter, Bankstown, seems to get better every year. Cumberland and Berowra in sixth and seventh this year had an increased range of genera indicating the skill of many individual growers.

Sydney OS, Western Suburbs, and St George also had displays of a high standard.

First prize for an individual display was won by the team of Messrs Bodell, Hansen and Madden, with the Chalmers family second. Both were beautiful.

Native Displays made a gracious impact. North Shore kept up their winning run over many years with a display which included many large specimen plants. Ku-ring-gai, Bankstown, Sydney, and Western Suburbs followed in that order. The recent crossings of natives included some into the third generation. Many of these showed good flower form and when grown to specimen size will be very attractive indeed.

There were only two entries in the Tabletop Native Display section and both were outstanding. This was won by Wal and Jill Upton, with Sid Batchelor second.

Two huge specimen plants attracted much favourable comment. These were *Dendrobium kingianum* 'Bungan Castle' covered 60 cm wide with a mass of red flowers, and a similar sized *D.* X *delicatum.* Both were grown by Eric Webeck. The former plant received an Award of Merit a couple of years ago.

BEROWRA OS SPRING SHOW

A beautiful show. Berowra's fine new community hall and its bushland setting created a wonderful atmosphere for orchids.

Tom and Enid Price won Champion Orchid with their *Cymbidium* Arcadian Melody x *C.* San Miguel. Reserve was a well flowered *C.* Narela 'Jennifer Gail' grown by Mrs Rene Gogerly. What a consistent winner this latter clone has been.

Once again Eric Webeck proved his prowess as a native grower by winning Champion Native with a huge potful of *Dendrobium* X *delicatum,* the leaves almost hidden by the flowers. Another *D.* X *delicatum* won Best Specimen Native for Rene Gogerly.

Best Coloured Orchid went to *Cymbidium* Sleeping Beauty, owned by Dr Jim Burstal. Berowra has always encouraged junior members and this schedule featured a provision for Champion Orchid grown by a Junior. This was won by Michelle Trotter with a nice *Paphiopedilum* Paeony 'Regency' x *P.* Gwen Pur. Congratulations Michelle.

Most successful exhibitor was Rene Gogerly. Next year will be the 25th Annual Show and planning is starting now to ensure it will be a very special show.

MORISSET AND LAKES DISTRICTS OS SHOW

Spring arrived at Charlestown Square with a blaze of colours provided by the massed display of cymbidiums and cattleyas. However, one plant stood head and shoulders above them all, that being *Cym.* Novocastrian 'Nancy', it gained for its owners, Tom and Edith Price, Grand Champion and Champion Cymbidium. This magnificent cultivar will certainly make its presence felt around the show benches when it becomes generally available.

Blc. Sylvia Fry 'Supreme' gained Champion any other Genera, this well grown plant was exhibited by Sid Jackson. The Reserve Champions were *Cym.* Highland Mist 'Lalchere' and a very nice seedling paphiopedilum grown by Frank Dobell.

Miniature and intermediate cymbidiums made up the bulk of the display. The most successful exhibition in this section was Gwen Burgess, gaining Champion Mini/Intermediate Cymbidium and best specimen with *Cym.* Mystique 'Robin', together with most of the class prizes — a very fine effort.

Due to the lateness of the season, the native sections were down on numbers, however Alex and Doreen Aitken managed to salvage most of the prizes here.

MANLY-WARRINGAH OS SHOW

Mr Tom Price proved once again just how good an orchid *Cymbidium* Doreen Darwen 'Miss Amanda' is if well cultured by winning Champion of this show. Champion Other Orchid was Mr R. Montgomery's *Cattleya* Lindmar 'Orbit'. Champion Native was a clone of the cross *Dendrobium* Star of Gold x *D. speciosum,* grown by Mr Wal Upton.

A many flowered species *Paphiopedilum venustum* became Champion Specimen, owned by Mr G. Olson. Mr S. Land was Most Successful Novice.

BYRON DISTRICT OS SHOW

Increased numbers of well grown exhibits in all classes at the Byron District Orchid Society's 27th Annual Spring Show on September 16 and 17, 1983 caused great interest to the judging panel and viewing public.

Congratulations to Arthur Winter, who once again scored most of the cymbidium prizes for Lou Sasso Cup

and Grand Champion of the Show with *C.* Narela 'Jennifer Gail'.

Merv and May Brown won Reserve Champion with well presented *Odontocidium* 'Tiger Sun'.

Owen and Beth Noble won the Hobbs Cup with *Dendrobium* 'Bardo Rose' as well as QOS Medallion for culture with this lovely Australian native hybrid.

Eileen King

TAMWORTH SPRING SHOW

The Eleventh Tamworth Orchid Society Show was held in the beautifully laid out Grace Bros Emporium. Although a little cramped for room the display created an attractive area between the hardware and gardening departments.

Grand Champion was *Cymbidium* Balkis 'Luath', grown by L. and M. Connors. Most successful exhibitor was Mr Max Tom. There were some interesting natives exhibited by V. and P. Kasch and Mr Sam Bright. A nice *Dendrobium* Bardo Rose won a First Prize for E. Coote.

The society meets on the third Wednesday of each month at the Centre for Continuing Education. Honorary Secretary is Mrs Mary Drewe and enquiries regarding joining can be made by phoning 66 3316.

Orchid Club of SA Spring Show

A great success! This show is always well organised and its venue ensures a steady stream of onlookers. Profits go to St John Ambulance Brigade.

Most Outstanding Bloom was *Cymbidium* Gurrana 'Alison', grown by R. and H. Fishlock. Mr E. Auliciems won Most Outstanding Bloom other than Cymbidium with his *Paphiopedilum* Gadabout 'Nik'.

Champion Seedling was *Cymbidium* Valley Zenith, grown by Valley Orchids. Keep an eye on this one.

Champion Intermediate was won by *Cymbidium* Ivy Fung 'Sultan' shown by G. and I. Spear. An attractive *C.* Tommy 'Amy' won Best Minicym for R. and G. Schultz.

Pure colour cymbidiums attract a deal of interest and this prize went to *C.* Valley One, grown by G. Forrest.

Johnston Orchids chalked up a fine win with their Champion Cattleya, *C.* Valerie Royston 'The Queen'.

An interesting class of Three Cymbidiums judged for colour was won by Mr M. Klaveniexs with the trio *C.* Forty Niner, *C.* African Adventurer, and *C.* Clarisse Carlton.

Champion Native Hybrid was Mr G. Forrest's *Dendrobium* Bardo Rose.

Prize for Best Display was won by the team of M.C. Strout and H.B. Viney. Mr and Mrs R. Rankin made an encouraging effort by winning a prize for the First Time Ever Display.

The list of classes was very comprehensive, and with three divisions in each class it meant that prizes were well distributed.

Everyone participating had a lot of fun.

SOUTH COAST ORCHID CLUB OF S.A.

Winter Show

Twenty members shared the 50 minor prizes offered at the Winter Show held at the Colonnades Regional Shopping Centre, Noarlunga Centre. Champion plant was an Intermediate *Cymbidium* Bingo 'Pink Beauty' HCC/OCSA-AOC exhibited by Mr and Mrs Glen Forrest. The plant carried nine spikes, each spike displaying approximately 25 flowers well above the foliage. Champion Standard Cymbidium was a crossing Alnwick Castle x Arcadian Melody registered as *C.* Christies Beach 'Winter Glow' — colour a rich orange, exhibited by Lambert Orchids. Relative to total number of plants exhibited was the large number of paphiopedilums exhibited.

The show was arranged in the centre court of the shopping centre and viewers had to pass through a pergola to view the plants which were arranged on two lines of double tired benches, each line displaying plants from either side.

A special feature of the show was a display of tropical orchids sent from Townsville by Lister Arrowsmith and other members of the Townsville Orchid Society, arranged tastefully by Brenda Lynch a former secretary of the AOC. This display created a lot of interest not only from orchid growers but by the general public and was much admired. Thank you Townsville.

The Mayor of the City of Noarlunga presented the President of "South Coast" with a Certificate of Merit in favour of the Townsville Orchid Society to mark the city's first visiting display and this gesture was a true reflection of the great interest created by Townsville.

John Leeder

PORT AUGUSTA SPRING SHOW

Judge, Mr M.J. Donhardt, reports that his was a very commendable show for a small club and that the club will grow from its small beginnings to be a great club in the dry north of South Australia.

Port Augusta is a major farming centre right at the head of Spencer Gulf. The show was held in the Railway Institute in conjunction with the Garden Club.

Most of the exhibitors were in the novice section but the winning plants would have been hard to beat in the open sections at most shows.

Champion of the Show was *Cymbidium* Levis Duke 'Bella Vista', a good flowering of 15 shapely flowers, nicely arranged on the raceme and very clean. Kitty Griffen was the grower.

Reserve Champion was *Cymbidium* Marion Miller, an intermediate type with five racemes carrying over 100 white flowers. A credit to its growers Geoff and Josie Clark.

Dean and Rose Butson proved their fingers were green by winning ten prizes, including Best Red Cymbidium with a magnificent *C.* Sensation 'Aminya' with 13 flowers on an upright raceme.

Congratulations Port Augusta. Keep up the good work.

WHYALLA ORCHID SHOW

Dean Butson of the Whyalla Orchid Society reports a very successful show. Many members of the Society have moved to other States and it will interest them to know how their friends in the Society fared at the Westlands Mall Spring Show.

Mr J. Sims' *Cymbidium* Highland Mist 'Lalchere' was Grand Champion. Reserve was a hardcane dendrobium cross (*D.* Anom x *D.* Ann) x *D.* Lady Hay, belonging to Mr C. Matters. Provisional Award, virtually third best

orchid, was the highly coloured *Cymbidium* Burgundian 'Sydney', belonging to Mr J. Disher.

Mr C. Matters won again with Best Seedling (*Lc.* Fiery x *Lc.* Goldcrest) x *C.* aurantiaca.

Quality was very good in all classes.

THE NOSSA SPRING SHOW

The Native Orchid Society of South Australia again held the Spring Show at the Goodwood Orphanage Education Centre. It was even more successful than their first fine show last year.

Champion Epiphyte was *Dendrobium* Bardo Rose 'Kenna', grown by L. and R. Moore. Champion Terrestrial went to H. Goldsack's *Pterostylis cucullata*. Besides the array of well grown epiphytes, there was an outstanding collection of terrestrials, including some interesting West Australians.

VOC Diamond Jubilee Show

A seedling shown for the first time became Champion Orchid of the Victorian Orchid Club Spring Show. It was a clone from the cross *Lycaste* Fiona x *L.* Koolena 'Aline' grown by Dr J. Coker. This genus is certainly creeping into collections. It is easy to grow and even the poorest flowers are spectacular. In the new crosses some real champions are emerging. A miniature cymbidium was judged Most Pre-Eminent Entry, *C.* Dr Baker 'Bewitched', grown by Mr G. Peterson.

Cymbidium Borough Green 'Karen June', owned by Mr R. Evans, was Champion Cymbidium. Reserve and Third Best Cymbidium were won by two divisions of *C.* Narela 'Jennifer Gail'. This lovely pink is from a cross made by Wondabah and registered in 1967. 'Jennifer Gail' has been a consistent winner at shows for many years. It needs to be well grown to win and this was evident in the culture of L. and M. Vines.

Seedling winners can be a pointer to what to buy. In this case Mr R. Hodgins' *Cymbidium* Jubilation 'A' confirmed just how good a crossing *C.* Wallara 'Gold Nugget' x *C.* Borough Green 'Conference' has been. Second in this class was *C.* Western Hill, from McBeans.

The class for Intermediate Cymbidium Seedlings was won by *C.* Ivy Fung 'Inferno' x *C.* Robyn 'Rouge', grown by Mr Hodgins.

First prize in Miniature Cymbidiums went to *C.* Winter Fire 'Heatherton' grown by Mr E. Kettle. Second prize to *C.* Pumisan x *C.* Catisona 'Burgundy', from McBeans.

Affiliated Societies Display was won by Melbourne, with the Orchid Species Society of Victoria second.

In all there were 60 classes and the standard in each was very high.

Ringwood Spring Orchid Festival

KEITH DUFFIELD

We who grow orchids know beyond dispute that they are the most beautiful, varied, complex, fascinating and possibly temperamental plants on earth. Like all beautiful things they almost cry out to be photographed or so it seems to the orchid grower who has a camera. There were swarms of shutterbugs at Eastland in Ringwood to record the spectacular orchid festival staged by the Ringwood Orchid Society.

Both upper and lower mall in the shopping centre were decorated with 24 stands of well-groomed show-standard blooms of orchids. Each stand was competing for prizes which were donated by 40 generous local supporters. These prizes covered 77 different classes, from display stands, display stands with a theme to individual orchid blooms. The four different grades of open, intermediate, advanced novice and novice covered the spectrum of competitors.

All things considered, a "good news" festival for all orchid lovers.

A group of orchid lovers hired a bus in Shepparton and travelled to Ringwood. Other folk came from Traralgon, Maryborough, Bendigo, outer suburbs of Melbourne and locally from Ringwood. The majority would carry home with them some photographic record of the scene as they saw it at Eastland, Ringwood.

One particular spectacle by Ern Kettle, covering an area of ten metres by four metres, won the Champion display at the festival. Included in this area were a large variety of genera all displayed to their best advantage.

Throughout the festival, raffle tickets were sold with the proceeds being presented to Kim's Cancer Research Fund.

A highlight of the festival was the opening by media personality Kevin Heinze. He complimented the orchid growers on the quality of their blooms and on the size of the show and presented prizes at a cocktail party.

A rundown on the prize list included: Champion Display of the Show, Ern Kettle; Best Display, Open Section, B. and M. Smith; Best Display, Second Division, G. Haar; Best Display with a Theme, B. and D. Shannon; Best Intermediate Display, B.S.M. Deakin; Pre Eminent Orchid of the Festival won by B. and M. Smith with *C.* Sleeping Beauty 'Leopard Lady' x *C.* Jean Slattery 'Supreme'; Champion Cymbidium, B. and M. Smith, *C.* Lagoon 'Meta'; Reserve Champion Cymbidium — Open and Intermediate, B. and M. Smith, *C.* Embers 'Yowie Bay'; Best Display — Advanced Novice, R. Garling, Best Display — 2nd Division Advanced Novice, O'Neill family; Best Display with a Theme — Advanced Novice and Novice, A. Ednie; Best Display — Novice, G. Hill; Best Display — 2nd Division Novice, R. Gillespie; Champion Cymbidium — Advanced Novice and Novice, R. Garling, *C.* Lagoon 'Meta'; Reserve Champion Cymbidium — Advanced Novice and Novice, Mrs Taylor, *C.* Beldivere.

MORNINGTON PENINSULA OS SPRING SHOW

Grand Champion was a plant of *Dendrobium* Bardo Rose owned by R. and D. Smith. The flowers were pure white on erect stems, large and firm in texture. If submitted this plant could take this year's Ira Butler Trophy. Incidentally, it was labelled var. album and this is technically incorrect since the term variety cannot be applied to other than the sub-species of a species, and the clonal name of a hybrid must not be latinised. Mr and Mrs Smith also won Reserve Champion Cymbidium with *C.* Lilian Stewart 'Coronation'.

Champion Cymbidium was the colourful *C.* Burgundian 'Chateau' belonging to F. Finger. Seedling buffs should keep an eye on the winners in the Cymbidium Seedling class: First *C.* Ann Miller x C.J. Davis, owned

by W. and M. Johnson, second *C.* Solana Beach x *C.* Firewheel. Both are interesting crosses.

Large Display was won by H. and M. Foster-Johnson, Small Display by the team of J. Borschmann, L. Mercer and S. Hall.

Most Artistic Display prize was won by L. and B. Avery, and Novice Display by J. and J. Perry.

MAROONDAH OS SHOW

Successful it was! Comments were positive, orchids were bigger, better and more numerous, and more plants left the sales table.

Champion Orchid was a break with precedent, and deservedly so. It is good to see a less common genus triumphant. This was *Ascocentrum* Mang Kait Kula, grown by C. and L. Harris. Reserve was that fine pink *Cymbidium* Narela 'Jennifer Gail', grown by B. Cusack.

It is remarkable how often *Dendrobium linguiforme* wins Champion Native. What a wonderful display of white feathery massed flowers it is capable of when carefully cultivated. Grower F. Date.

Youthful Michael Coker won the VOC Cultural Award with *Paphiopedilum argus,* also the display section for no more than nine orchids. In the class for Group of Cymbidiums Michael was fractionally beaten by his father Dr Julian Coker. There were several classes for small displays, all with high quality plants.

Some beautiful cymbidiums, many of them shown for the first time, were exhibited by I. and E. Whitcombe. This team won the prize for Most Successful Exhibitor.

Many enthusiastic people exhibited wonderful plants in the many classes and prizes were well distributed, and well earned.

GIPPSLAND ORCHID CLUB SHOW

The second Spring Show was held in Traralgon. *Cymbidium* Narela 'Jennifer Gail' owned by Mr John Norton took both Champion Cymbidium and Champion of the Show. A delightful plant of *Cymbidium devonianum* with six spikes owned by Mr and Mrs A. Newbown was Reserve Champion.

Mr and Mrs P. Manicola were the most successful exhibitors and were awarded the VOC trophy of a pewter vase.

In the Australian Native section, Mrs O. Capes took the champion sash with a plant of *S. hartmannii* and P. and S. Evans were successful in the Any Other Genera group with a lycaste seedling flowering for the first time.

H.J. Jacobs

SCOTTSDALE OS SPRING SHOW

The society's Third Annual Spring Show transformed the Mechanics Hall into an exquisite garden. Focal point was a very decorative wishing well.

Mr Nick Van Den Berg proved his prowess as a grower by winning the major prizes: Best Large Display, and Grand Champion with his splendid white *Cymbidium* Jungfrau 'Dos Pueblos'. He also won most of the cymbidium classes.

Mr Van Den Berg proved that cymbidiums can be grown well in Scottsdale and it is certain that members who just missed out at this show will be pushing him hard at future shows.

Mr Groves did well to win Best Novice with *Cym.* Valley Flower 'Cherry Ripe', and Best Intermediate Cymbidium with *C.* Agnes Norton 'Showoff'. Mr E. Rainbow won Best Miniature with the dark red *Cym.* Beacon Fire 'Cecil Park'. *Oncidium* Varimyre x *O.* Lava Flow won a first prize for Mr K. White. Mrs Peg Kendall won with her *Den. gracicaule.*

West Australia's great shows

The Orchid Society of Western Australia (inc.) has completed the society's show season for 1983 with the conclusion of its spring show at Garden City Booragoon on Saturday, September 24.

The society's winter show was held at Garden City Booragoon July 13 to July 16 inclusive. This show drew entries equal to last year with the usual exhibitors being prominent.

The main trophy winners at the winter show were as follows.

Grand Champion was a cattleya well grown, well presented and exhibited by V. and B. Studman, *Cat.* Pastoral Innocence.

Champion Paphiopedilum was *Paph.* November Star, exhibited by J. and D. Fleming.

Reserve Champion Paphiopedilum was *Paph.* Paeony x *Paph.* Botan exhibited by K. and D. Rex. Both champions were well grown and drew a lot of attention from the public.

The best Cymbidium was a beautifully presented plant *Cymbidium* Lunagrad 'Elanora' exhibited by C. and D. Morphett.

The spring show was opened on Monday, September 19, the first time a show commenced on a Monday. It was the main attraction for the spring festivities at the centre and to help celebrate the opening of a number of new shops.

Grand Champion of the exhibition was a softcane Dendrobium exhibited by C. and S. Slusarczyk. It was *Den.* Yukidaruma 'King', beautifully trained over a frame to present the plant and flowers in the form of a fan.

Reserve Champion of the exhibition was *Cymbidium* Nancy Brown 'Cooksbridge' exhibited by J. and B. Dunk. This cymbidium was also judged to be the Champion Cymbidium of the show.

C. Slusarczyk exhibited the best cymbidium in the novice section and with his father won the AOC Award with their *Den.* Yukidaruma 'King'. The quality of the exhibits over the two shows was better than last year and the remarks from the public supported this.

The ladies' auxiliary once again did a wonderful job and the society appreciates their effort.

BUNBURY ORCHID SOCIETY SHOW

The Bunbury Forum Shopping Centre was once again the venue for The Bunbury Orchid Society's winter and spring shows.

The central court was ablaze with colour on both occasions and the overall effect was impressive.

A large variety of orchids was exhibited by growers in July. The main trophy winners were: Champion Orchid, *Paph.* World Venture x Mad Hatter, Mr and Mrs T. Bodrogai; Reserve Champion, *Cym.* Lunara 'Kimanda', Mr and Mrs W. Cruickshank; Best Novice Orchid, *Paph. fairrieanum,* Mr and Mrs J. Kemp; Best Paphiopedilum,

Paph. World Venture x Mad Hatter, Mr and Mrs T. Bodrogai; Best Cattleya, *Cattleya* Sylvia Fry 'Supreme', Mr A. Johnson; Best Miniature Cymbidium, *Cym.* Bedivere 'Highbury', Mr and Mrs F. Wilding; Best Cymbidium, *Cym.* Lunara 'Kimanda', Mr and Mrs W. Cruickshank.

September saw another spectacular display of orchids in the centre mall.

Supreme individual triumph was attained by Mort and Carlene Davidson who for the fifth year in succession grew the Champion Orchid of the show. The successful exhibit was *C.* Highland Mist 'Dillabirra'.

Other main trophy winners were: Reserve Champion, *Paph.* World Academy 'Quindalup', Mr and Mrs M. Davidson; Best Other Orchid, *Paph. haynaldianum*, Mr and Mrs L. Munnings; Best Specimen Orchid, *Cym.* African Adventure 'Jungle Trail', Mr and Mrs M. Davidson; Cymbidium — Outstanding Colour, *Cym.* Wallara 'Gold Nugget', Mr and Mrs L. Munnings; Best Pure Colour, *Cym.* Sleeping Dream 'Tetragold', Mr and Mrs L. Field; Best Novice Orchid, *Cym.* El Capitan, Mem. R. Chrisman, Mr and Mrs A. Burgess.

MELVILLE OS SHOW

This WA society held its very successful Spring Show at the Roy Edinger Hall, Melville. *Cymbidium* Pearl Balkis 'Cooksbridge', owned by Mr and Mrs L. Gale, was Grand Champion. Reserve was *Ondontoglossum* Tontor 'Gretel', grown by Mr and Mrs J.A. Coleman. Best Novice went to *Cym.* Sylvation, an interesting clone from the crossing *C.* Sylvannia and *C.* Sensation. Congratulations to its grower, Mr Carl Slusarczy.

NORTHERN DISTRICTS OS WINTER SHOW

The Winter Show at the Morley City Shopping Centre, north of Perth, attracted very favourable attention. Champion Orchid was a well grown *Cattleya* Mary Lynn McKenzie, owned by Mr and Mrs L. Gale. This clone is from a cross of *C.* Bob Betts and *C.* Swan. Reserve Champion was *Cymbidium* Doreen Darwen 'Miss Amanda', owned by Mr G. Webber.

Champion Paphiopedilum was *P.* World Exploit 'Nowarra', owned by W. and L. Janney.

The first sexageneric

The RHS list of new orchid hybrids published in April of this year announced the world's first sexageneric orchid hybrid. It is the only sexageneric hybrid in the plant or animal kingdoms. It was from a cross made by that master of intergeneric breeding, Mr W.W.G. Moir.

The cross has been registered as *Brilliandeara* Gary in honour of Mr Gary Brilliande who helped the housebound Mr Moir.

Mr Moir says of his cross, "The blood line behind all plants in this *Brilliandeara* Gary were all top quality and that is a great part of the success in flowering it. However there are still too many clashing dominances, and I do not believe these mixtures are healthy to produce. Planning to get more flowers into the higher generics is the biggest problem. It must be done in the early stages of making bigenerics and trigenerics according to the order in which one puts genera into the mixture, as it determines the floriferousness of the progeny . . ."

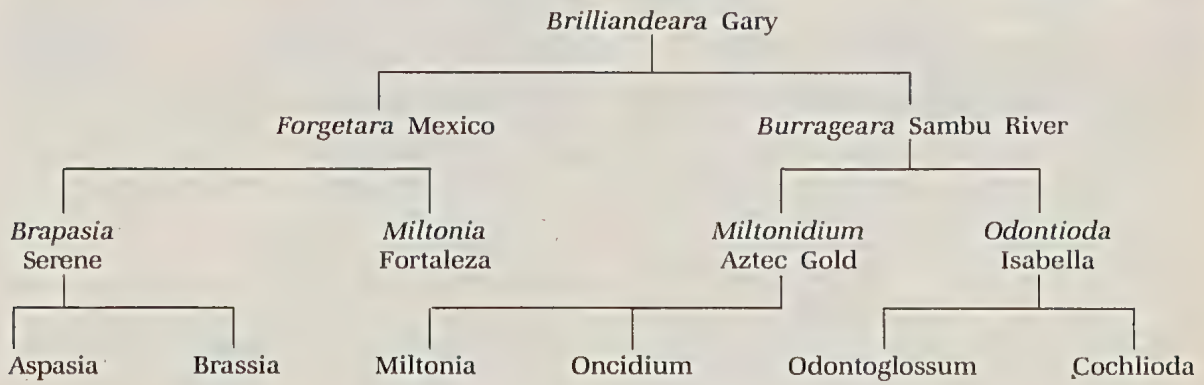
Mr Moir states that the new hybrid is nothing startling since it shows that "the best laid plans for producing colour come out white".

The flower is star shaped and symmetrical. Each segment is rhomboidal, that is widest in the middle, the petals a little more so. It is basically white with dull red markings. It is pictured on page 129 of the English *Orchid Review*, April 1983 issue.

The following list, also from the *Orchid Review*, shows the man-made genera together with the naturally occurring parent genera and the year of the first cross which led to the production of *Brilliandeara* Gary.

Odontioda (Odontoglossum x *Cochlioda)* 1904
Burrageara (Miltonia x *Oncidium* x *Odontoglossum* x *Cochlioda)* 1927
Miltonidium (Miltonia x *Oncidium)* 1936
Brapasia (Aspasia x *Brassia)* 1957
Forgetara (Aspasia x *Brassia* x *Miltonia)* 1972
Brilliandeara (Aspasia x *Brassia* x *Miltonia* x *Oncidium* x *Odontoglossum* x *Cochlioda)* 1983

The above genera were combined in the following way to produce this first sexageneric.



Grand lady wills unique library to university

RONALD KERR

Early this year the world's most famous woman orchidologist died at the age of 92, leaving a fantastic library of orchid and horticultural books to the University of California, Irvine.

A new generation of Australian orchid growers may not recognise the name Emma D. Menninger because, since the death of her horticulturist husband in 1971, the late Emma Menninger has not been in the public view as much as in the golden era of Greenoaks, the California estate from which she and her husband registered 126 cymbidium orchid hybrids and conducted orchid research. Horticultural research too, for Elmore Menninger wrote several widely acclaimed botanical and gardening works.

The late Emma Menninger was just as indefatigable a worker as her husband. Together they toured the world's orchid habitats in search of species worthy to be stud plants. This led to Mrs Menninger writing a monogram on cymbidium species which was the most complete account of the genus written up to that date. It had a marked influence on the development of hybridising in California, and consequently in Australia and Europe.

The Menningers started as hobby growers in the thirties and as their collection and hybridising grew so did their library of horticultural books. They acquired such rarities as *Lindenia, Reichenbackia, Cogniaux,* the *Orchid Album,* and a complete set of Curtis' Botanical Magazine. Each of these is worth a small fortune today.

There would be very few unbroken sets of *Curtis'* available in the world. The first issue was printed in 1787. Since its purpose was to publish new plant discoveries in colour illustrations *Curtis'* is a veritable history of modern botany. Right up to 1948 the ten thousand colour plates published over the span of 161 years had been printed in black outline and hand coloured. Since 1948 printing has been from plates made by photo separations.

Elmore Menninger became a member of the Royal Horticultural Society. During a visit to England he obtained permission to photograph in colour paintings of the 500 cymbidium award plants awarded up to that date. Sets were sold to societies and orchidists and the proceeds donated to the RHS. He also bought outstanding stud cymbidiums and established in his Greenoaks laboratory that they were tetraploids. To that time the importance of ploidy was unknown among hybridisers.

The Menningers were the first to realise the importance of *Cymbidium* Early Bird 'Pacific' in breeding for early flowering hybrids. Their crosses include White Christmas, Stanley Fouraker, Arcadian Melody, Twelfth Night, and Fred Stewart.

Mrs Menninger was a leader in developing miniature cymbidiums. *Cymbidium pumilum* figures nineteen times in Greenoaks crosses. *C. devonianum* was used three times; *C. hoosai, C. pendulum,* and *C. dayanum* once each.

She and her husband made a special trip to Australia to collect *C. canaliculatum, C. madidum,* and *C. sauve.* From these in the 1960's and 70's came *C.* Cricket (= *devonianum* x *madidum*); *C.* Penquin (= *pendulum* x *canaliculatum*); *C.* Kurunda (= *madidum* x *sauve*); *C.* Little Nugget (= *madidum* x Greenwood); *C.* Madelene Madsen (= *madidum* x Lucy) *C.* Canterbury (= Princess Mary x *canaliculatum*); *C.* Abundance (= Lyoth x canaliculatum).

The Menningers gave substantial financial support to orchid research and particularly to the University of California, Irvine, where Professor Joseph Arditti specialises in orchid research, and is curator of the university's extensive orchid collection. Due to the university's library being efficient and readily available to students, Mrs Menninger willed to it this priceless library.

We can be sure that under the capable direction of Professor Arditti and librarian Mr Roger Berry it will be of utmost value and benefit.

AOR thanks Mr Len Lawler of Sydney University for a copy of the *University of California Bulletin* relating to the bequest.

SIR HENRY SOMERSET CONSERVATION AREA

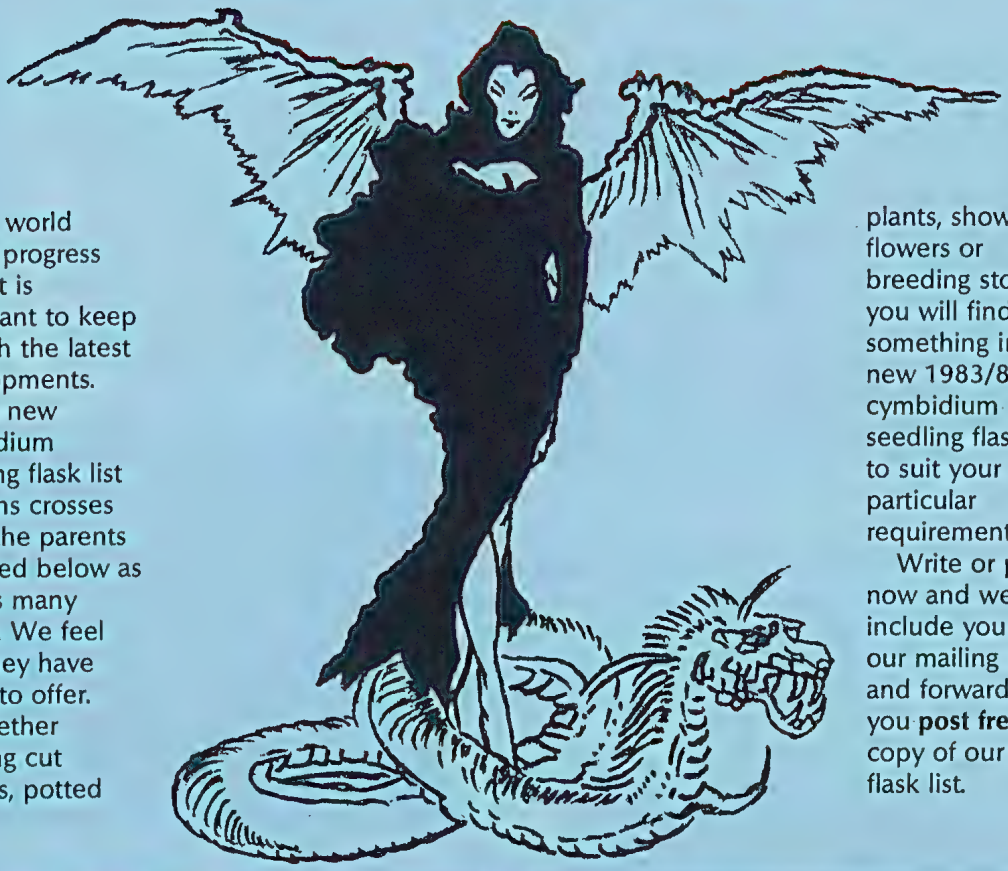
Readers will remember previous reports in AOR of this wonderful reserve in northern Tasmania, specifically set aside as a terrestrial orchid reserve. The project was instigated by Peter Tonnelly and the land was donated by the paper making firm APPM Ltd. The Australian Orchid Foundation contributed funds to the project. Peter Tonnelly has continued to police the reserve and during Peter's recent absence in England, Doug Wells has kept up the good work.

Working parties have kept the area free of rubbish, and observed the progress of flowering. The genera *Caladenia* and *Pterostylis* have done well this season.

NEW SOCIETY IN QUEENSLAND

The Childers and Isis District Orchid Society has just been formed. Childers is inland from Rockhampton. AOR looks forward to receiving full details of this society for publication.

FOXFIRE ORCHIDS



In a world where progress rules, it is important to keep up with the latest developments.

Our new cymbidium seedling flask list contains crosses using the parents depicted below as well as many others. We feel that they have much to offer.

Whether growing cut flowers, potted plants, show flowers or breeding stock, you will find something in our new 1983/84 cymbidium seedling flask list to suit your particular requirements.

Write or phone now and we will include you on our mailing list and forward to you **post free** a copy of our latest flask list.



(FRED STEWART x BABYANA) 'PINK PEARL'



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TAMBORINE MOUNTAIN ORCHIDS

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CLOSED SUNDAYS.



Blc. GOLDEN SLIPPERS 'CALIPH OF BAGHDAD'

HCC/AOS

This orchid is a gorgeous concolour which has everything going for it, shape, texture, colour, the lot.

Priced at $10.00 each in 2½" Pot. Plus Postage.



Lc. LISA ANN 'FU LAN'

Another beautiful Lisa Ann. A brilliant orange-red of fine shape with two golden eyes in the throat. ***A MUST!***

Priced at $10.00 each in 2½" Pot. Plus Postage.



Lc. BUTTERFLY BELLS 'QUEEN OF FORMOSA'

How's this one for a mixture of colour, something for the lover of exotic splash petals.

Priced at $10.00 each in 2½" Pot. Plus Postage.



Blc. FORMOSAN GOLD 'WEI LIANG'

An outstanding yellow with a striking, larger than usual, red labellum. ***EXQUISITE.***

Priced at $10.00 each in 2½" Pot. Plus Postage.

****

This year we have decided to act as ***Father Christmas*** *by giving one Imported Cattleya Seedling (2½" Pot) Our Choice, to those who order $50.00 worth or over, from either of these two pages. This offer applies only to orders received before the First of February 1984.*

****

A FEW MORE CATTLEYA MERICLONES FOR YOU TO CHOOSE FROM . . . All in 2½" Pots.

Lc. ROYAL EMPEROR 'WADE', AM/AOS ..... $10.00 each
This beautiful, large, smoky-red cattleya will take some beating in both shape and colour.

Lc. PAGEANT 'LU KONG' ..... $7.50 each
A beautiful semi-alba of heavy substance with a vibrant purple labellum.

Blc. MEM. CRISPIN ROSALES 'RUEN YUAN', AM/TOS. ..... $10.00 each
Still some available of this unbeatable show-bench lavender.

Blc. GREEN GIANT 'ALPHA GREEN VALLEY' ..... $10.00 each
Every collection needs a good green, here is one that is well sought after. It is a solid green of medium size.

Blc. FAYE MIYAMOTO x Blc. CHIEF JOSEPH ..... $10.00 each
A golden flower with a beautiful, large, red labellum.

Slc. MAE HAWKINS 'MIYA', HCC/AOS ..... $7.50 each
A must if you are looking for a good red.

Lc. SHELLIE COMPTON 'TOUCH OF CLASS' ..... $7.50 each
A gorgeous semi-alba with petals slightly tipped and purple lip.

Lc. RAINBOWS GLOW 'NONG JUAN' ..... $7.50 each
A well-shaped, bright gold with a red labellum.

Blc. RUTH MIAO-LI 'DESTINY' ..... $7.50 each
Another golden flower.

Bc. MOUNT HOOD 'MARY', AM/AOS ..... $10.00 each
An eight to nine-inch white flower.

ALL PLANTS ARE AS PRICED PLUS POSTAGE.

The Directors and Staff of

TAMBORINE MOUNTAIN ORCHIDS

would like to wish their many valued friends and customers A Happy Christmas and a Prosperous New Year.

CLOSED SUNDAYS.

THE PAPHIOPEDILUM GROWER'S MANUAL

by LANCE A. BIRK

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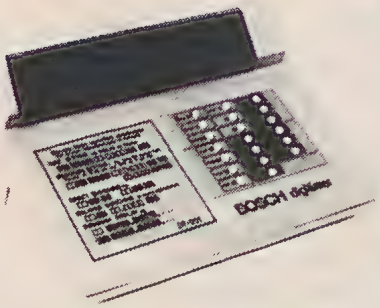
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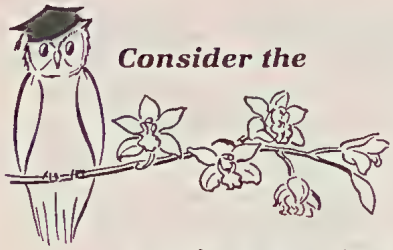
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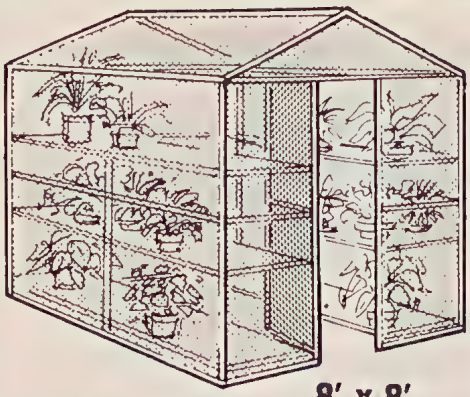
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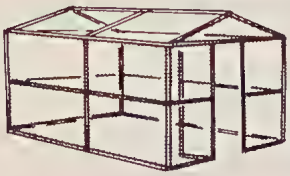
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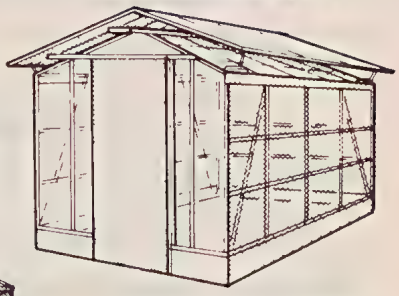


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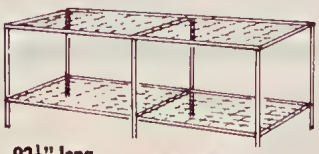
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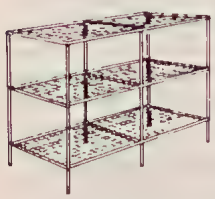
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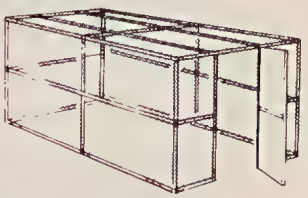
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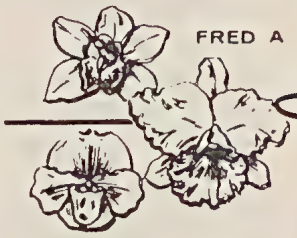
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252 **Blc. Marita 'Lenette' x Lc. Ann Follis 'Green'** — *bright, glistening yellows and orange. Size B = $6.*
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KM284 **Hepa (Tomie 'White' x phalaenopsis 'bicolor')** — *superb phalaenanthe, white and bicolour. Size A = $3.*
WS20/79 **Impact x Michael Sado** — *dark phalaenanthe, multi-seasonal blooming. Size B = $6.*
WS31/77 **D. Mousmee x Farmeri-thyrsiflorum** — *outstanding bunches of pink blooms. Size B = $6, C = $12.*

HOLTTUMARA:

974 **Aranda Lucy Laycock x Ren. (storiei x isosepala)** — *large red branching sprays. Size C = $10.*

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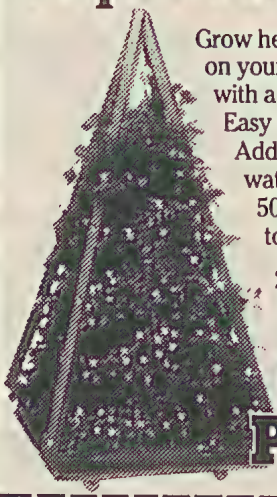
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2. ***By breeding, this flowering time is feasible but further flowerings are necessary for verification.***
3. ***(White Christmas x Fanfare) 'Flare' usually spikes twice from its bulbs.***

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plus cost of mother flask	*$7.50*	
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Non-germination fee is cost of mother flasks — usually		*$7.50*
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NOTES:

Each replated flask has 45 seedlings planted. Allow mother flask cost of $7.50 for one to three replates and a further $3.50 for each three additional replates after that for each cross.

If the additional safety of two mother flasks for a cross is required it must be specified. Previously two mother flasks were automatically used.

It should be noted that three replates now total only 60¢ more than previously. Sharply-increased labour costs have been offset by reducing replate time. This results in some additional small plants being present which were not planted.

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AUSTRALIAN Orchid REVIEW

MARCH QUARTER
Vol. 49 No. 1

Printed and Published by:
GRAPHIC WORLD
14 McGill Street, Lewisham 2049
560 6166

- **Editorial Associates:**
QUEENSLAND: Mr Frank Oelkers, 419 Robinson Road, Geebung 4034.
VICTORIA: Mrs I. Hutchins, 37 Elliot Street, Mordialloc, Victoria 3195.
SOUTH AUSTRALIA: Mr N. Lenkic, GPO Box 730, Adelaide, SA 5001.
WESTERN AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154.
TASMANIA: Mr C. Nicholas, 7 Kelvin Avenue, Moonah, Tasmania 7009.
INTERNATIONAL: Mr G. H. Slade, Box 797, Vila, Vanuatu.
- **Editor: Ronald Kerr.**
- **Editorial Committee:**
R. KERR, G. HANSEN
A. B. PORTER, R. MILLER
- **Address Editorial to:**
R. KERR, 260 Geoffrey Road Chittaway Point, NSW 2259 Phone: (043) 88 2605
- **Advertising, address to:**
ELIZABETH LOWE, 14 McGill Street, Lewisham, NSW 2049. Phone (02) 560 6166
- **SUBSCRIPTIONS.** 1984. Within Australia $15.00. Overseas surface $16.50 or $US15.50. Airmail rates on request.

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Contact these secretaries:
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SOUTH AUSTRALIA: Mr D. J. Harris, 36 East Avenue, Black Forest 5035. Phone: 297 7525.
WEST AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154. Phone: 330 2132.
TASMANIA: Mr J. F. Smith, 11 Warren Court, Howrah 7018. Phone: 44 1555.
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Cymbidium canaliculatum — rare colour form ..... Front Cover

To comply with the International Code of Botanical Nomeclature the whole of a species is in *italics* and the second term has no capital. With hybrids only the first term is in *italics*, the second starts with a capital and is not latinised. Generic names, used in a non-botanical sense do not have a capital nor are they in italics. In society bulletins and on place-cards italics can be indicated by underlining.

COVER STORY

This green *Cymbidium canaliculatum* could be the only one of its kind. Read the article by Gordon Hansen on page 42.

Mark Clements triumphs at Kew

Mr Mark Clements of the Canberra Botanic Gardens is working at Kew on a grant from the Sainsbury Trust.

Much of his work has been devoted to the symbiotic raising of rare European terrestrial orchids. This follows his success with similar work on Australian terrestrials.

The English journal *New Scientist* thinks so highly of the results achieved by Mr Clements at Kew that they devoted nearly a page to reporting them in the issue of May 26, 1983.

The *New Scientist* points out: "In the wild, the tiny seeds of terrestrial orchids refuse to sprout until they are invaded by the right fungus; they extract essential nutrients from the fungus, apparently by digesting the filamentous hyphae of the fungus. Thereafter the young orchid and fungus live in a mutually-beneficial association (symbiosis). Clements has found just the right way of introducing the seed to the appropriate fungus.

"In general only one species of fungus will suit a particular species of orchid, so Clements begins by extracting the fungus from the roots of an established orchid and isolating a pure culture of this fungus in a petri dish. Then using a low-nutrient medium — a mixture of oats and water, rather like a thin porridge — set in agar (a gelatine-like substance extracted from seaweed), he sows the orchid seed and infects it with its fungus. The seed sits on top of the agar, in easy reach of the growing fungus. Conditions have to be just right for the orchid but not too good for the fungus, otherwise the fungus will grow so fast that it swamps the orchids. Clements has found that the weak porridge coupled with a coolish temperature, 20°C in the daytime and 15°C at night, is ideal for the growth of the orchid even though the fungus grows best at 23°C. Many orchids take a year or two to germinate in the test tube in the absence of the orchids, but in Clements' laboratory they may sprout in a mere twenty days. In nine months they are ready to plant out in soil . . .

"So far Clements has isolated many different species of fungi, mostly basidiomycetes from terrestrial orchids. He suspects that there may be as many as 100 different species of fungus, and many strains of each, associated with orchids all told . . . Clements has found that related species tend to share the same fungus . . .

"Clearly this technique is a great boon to the conservation of wild terrestrial orchids. Each orchid flower produces thousands of tiny seeds which could now be germinated in the laboratory. Britain's population of monkey orchids, *Orchis simia*, down to a few specimens, could thus be rejuvenated . . .

"Clements' technique may also take some of the pressure off wild orchids, which are sometimes illegally dug up and sold . . . When this technique is adopted by commercial growers a whole range of wild orchids will become available to the public . . .

". . . we at least have the technology to coax the endangered orchid out of its seed."

AOR acknowledges *New Scientist* for the above extracts from its article. Acknowledgment and thanks also to Mark Clements for his fine work at Kew on the symbiotic culture of European terrestrials. This work was initiated at the Canberra Botanic Gardens and due credit must be given to the directors for backing it. Our Australian Orchid Foundation has also contributed to the work at Canberra.

Mr Mark Clements has been making good use of his time in Europe. In the Spring of '83 he visited orchid areas in Crete and northern Italy. In July he visited south-western France.

In addition to his work on the micropropagation of endangered European species he has undertaken an examination and description of the Australian orchids in John Lindley's herbarium collection at Kew. Also the describing of fourteen new taxa in the genus *Pterostylis*. A second edition of *Checklist of Australian Orchidaceae* is also in progress.

With D.L. Jones and P.S. Lavarack he is collaborating on work for the orchid volume of *Flora of Australia*. They will cover the genera *Pterostylis, Calochilus* and *Dipodium*.

Orchid Stamp Club International

This society is now firmly established. Although most members are Australian there are many from overseas.

All members will be kept informed on past and present issues, availability and values. A stamp bank has been established.

Subscription for Australian members is $5.00 per person or family. Other countries $8.00 because of increased postage rates.

Collectors can send enquiries and subscriptions to the honorary secretary: Mrs Myra Chalmers, 25 Turriell Point Road, Lilli Pilli, Caringbah, NSW, Australia 2229.

"Nature has formed orchid flowers in such a way that, unless they make us laugh, they surely excite our greatest admiration." — Jakob Breyne in 1678.

THE SUPER-PRODUCTION CYMBIDIUM

ALVIN BRYANT

Articles commenting on high productivity in standard cymbidiums appear in the various journals from time to time. However, to my knowledge none of them have examined the pathway for the gaining of super-production cymbidiums to cover the full colour range over the entire season.

Let us look at some facts. Super-production breeding clones do exist at present. I have some and the genetic material which produced them is not exclusive to me so others must have them also. As it only takes one super-production breeding clone to eventually change the world's orchids over we should realise that even now the breakthrough has started which is as significant as any of the others which have occurred before namely, (1) the advent of the spontaneous tetraploid, (2) the colchicine conversion of diploids to tetraploids and (3) mericloning.

What is about to happen is a hybridising triumph. Unlike the other breakthroughs which were more the result of a happening, this one is the result of the progressive collection of desirable properties until they are all present in the one clone. As such it has taken time to reach this stage but what happens from now on is predictable, certain and economically dramatic as must be any event which will change the world's cymbidiums as we now know them.

It is not within my scope to comment on the involvement of others in super-production development but rather to limit what follows to one particular breeding line within my nursery so the pattern of inheritance can be examined. With this example it should be possible to better identify the super-production potential of the breeding lines which are on the world market. If I am correct in my surmise it will also cause the rethinking of present stocking plans.

The realisation that I was holding the genetic material of super production was something which occurred to me only after a number of seasons. It had its beginning when I flowered some Winter Fair seedlings which had been imported from Stewart's of California. One of them a crystal white was given the name of Winter Fair 'Crystal'. Its many fine qualities made it a prime choice as a tetraploid breeder especially as it flowered in June and I was specialising in the development of the early-flowering tetraploids. Its free-flowering properties were noted each season but it was not until the clone was broken that it was realised that it had flowered twice from every bulb. The clone was watched in subsequent flowerings and the reason the multiple-spiking property had escaped attention became apparent. Each bulb flowered twice but it was over a two-year period.

Now this multiple spiking property was worth investigating and its siblings were examined. One of these also multiple spiked. To further check on the inherited nature of this property one of the parents, Fred Stewart 'Olympus' was imported and this clone frequently but not always multiple spiked throwing two upright spikes at the same time, each carrying 16 or so large white blooms. The search was widened and among the collections of friends were odd seedlings from Fred Stewart 'Olympus' some of which also multiple spiked.

In the seedlings of Winter Fair 'Crystal' a percentage of multiple-spiking clones appeared. One of them a Winter Wonder flowered for the first time in 1981 with a straight upright raceme carrying 17 fine form cream blooms. Even though its lip was to some extent modified it was so outstanding that the varietal name 'Crystal Ball' was given. This name turned out to be far more prophetic than expected for in 1982 one of the two new bulbs formed threw two spikes totalling more than forty blooms and the other threw one spike with better than 20 blooms. This year this same bulb threw two more spikes to bring the bloom total for this bulb to well over 60. The new bulb carried a spike with 25 blooms and being a third-generation multiple spiker it seems a safe prediction to expect one or more spikes from this bulb next season. Nothing is infallible however and if it does not it will not destroy the worth of this type of development.

Inevitably the yield of this clone was compared with that of other clones. Unexpectedly, problems arose for in my mind I had started to think of this as a super-production clone and what I wanted to compare it with was a typical standard-production clone. Alas there were no definitions. Even worse when I considered the matter further I realised that such terms as these could only be applicable to a particular point in time for the super-production clone of today would be the standard-production clone of tomorrow. And it still did not end for just how much extra production was needed over a standard-production clone before it could be considered a super-production clone. If comparisons were to be made these matters had to be resolved.

If you agree that a clone which doubles existing production is sufficient to change the world's

production orchids over, then let this be the minimum requirement for a super-production clone. For a standard-production clone let us take a model of what presently constitutes many of the clones presently used in Sydney. These clones:—

(1) average about 10 blooms to each spike.
(2) flower once from each bulb.
(3) may miss flowering if the new growth is not on the point of bulbing in January.

This model of a standard production clone will have to be adjusted at the individual level from nursery to nursery.

Now Winter Wonder 'Crystal Ball' has the following properties:—

(1) it is tetraploid.
(2) each spike averages 20 blooms.
(3) each bulb flowers two or three times.
(4) the spikes are straight and upright.
(5) each bulb flowers.

If the yield is compared the production would be doubled if each bulb only produced one spike, quadrupled for two spikes and six times as great for three spikes. The yield however would be greater again however for its inheritance indicates that each bulb will be sure to flower. If a super-production orchid is one which can double present production then there is a very safe margin to justify calling Winter Wonder 'Crystal Ball' a super-production clone.

If super-production clones are going to change the world's orchids over then it is the orchids of commerce which are going to be affected. The grower requirement is for super production but the buyer preference is for straight stems where stem sales are involved and for polyploid blooms because of their better substance and lasting qualities. This requires the super-production breeding clone to be tetraploid to avoid sterility barriers. Assuming other properties to be satisfactory the five properties listed for Winter Wonder 'Crystal Ball' then become the minimum requirements for a super-production breeding clone.

It can be validly argued that stems which average 20 blooms or more do not fit today's requirements where stem sales are involved. The present preference is for about 10 blooms. This comes about because costing has been by the bloom and stems with too many blooms become too expensive. Looking ahead however, it is inevitable that costing will be by the stem and then it can be expected that pressure will occur to have more blooms on the stem.

There is however, another pathway to super production and that is by growing clones which readily produce a greater number of new bulbs each year. This has to be weighed against the cost of repotting at more frequent intervals.

If you agree with this approach to what constitutes a super-production breeding clone then you will also agree that the key is the multiple-spiking property. It has been my plan to feed in the multiple-spiking property over the full range of colours for each month of the flowering season and then back cross and intercross the progeny. One of the best happenings to date has been the fact that multiple-spiking clones crossed with normal clones throw a small percentage of multiple-spiking clones in their first-generation crosses.

Those who have not been involved in this area to date should realise that it is not all straight sailing with multiple-spiking clones for there is a tendency to multiple spike at the expense of new growths. At present I have found bulbs which throw two spikes and perhaps three have a satisfactory new growth rate but above this there is a doubt. I have no doubt that further development will resolve this also but for the present I am thinking in terms of two spikes per bulb to give more than four times present production. This is presently capable of positive achievement with the possibility that it will almost certainly be much better.

18 Kangaroo Point Rd, Sylvania

Catalogues received

Alvin Bryant. The November 1983 list contains interesting observations on the development of "super-production cymbidiums". Mr Bryant is now breeding for strains capable of greatly-increased flower production for early, flush and late seasons, and in all colours. Keep up with what's happening. Send SAE for this list.

Phil Spence's Orchid Productions. Phil specialises in supplying flasks. The range includes rare species, hybrids of high potential and interesting New Guinea and Australian species and hybrids.

Phil has a high reputation for Australian hybrids. A great number of these are being snapped up by overseas enthusiasts, including many in the United States, Europe and Israel.

Get your copy by sending to Orchid Productions, PO Box 102, Forestville 2087.

Hope Island Orchid Nursery. Don't miss this listing if you are shopping around. The range is large but items are not described. Nonetheless you could find that special item you have been looking for. The nursery is mail order only, although a visit may be arranged by phoning (075) 30 8272. Send SAE for list to PO Box 499, Southport, Queensland 4215.

Mt Beenak Orchids. The Summer-Autumn 1984 Catalogue will interest the cymbidium enthusiast. This nursery is agent for Featherhill, Geyserland and Everglades nurseries. They also have the Keith Andrew Bulbarrow mericlones. You can get your copy by writing to Mt Beenak Orchids, RSD 92, Three Bridges, Victoria 3797.

Orchids and the Water-conserving Device Crassulacean Acid Metabolism (CAM)

DR BEN WALLACE

Background: Photosynthesis is the most fundamentally important of all the complex and interacting biochemical and physiological processes that take place in plants. In essence, it is the taking into the leaf of gaseous carbon dioxide (CO_2) and the combining of this with water taken up by the roots to produce simple sugars such as glucose. The reaction takes place within the chloroplasts and is driven by energy extracted from sunlight by the green pigment chlorophyll. The sugars form the basic ingredients of the myriad energy-transfer and structural fabrication processes, the sum total of which comprise the life of a plant.

Because photosynthesis depends directly on light, the taking in and fixation of CO_2, in most plants, takes place during the day. But in the CAM system, this occurs at night. The CO_2 is carboxylated into malic acid and stored ready for decarboxylation back to gaseous CO_2 the next day. With the morning light, photosynthesis begins, decarboxylation commences and the increased concentration of CO_2 thus produced inside the leaf causes the stomates, or pores, to close. CO_2 release continues during the day and thus leaf acid content runs down. This daily acid fluctuation, incidentally, gives rise to the 'Acid Metabolism' part of the name; CAM was first discovered in members of the family Crassulaceae, hence the derivation of the rest of the name.

The question then arises as to why CAM plants go through the extra work of fixing their CO_2 at night only to convert it back to the same product the next day. The key to this is connected with the fact of the stomates being open during the day in the 'normal' (or C3) system, but only so at night in CAM plants. This is important because while CO_2 diffuses into the inner leaf via the



Ecological and physiological factors related to CAM in *Dendrobium speciosum*, Autumn, 1980, Long Point.

Subfamily *Epidendroideae* – species so-far tested for CAM: '+' = CAM; '–' = non-CAM: '#' = intermediate results.

Oberonia muelleriana	+			*Bulbophyllum elisae*	+
Liparis bracteata	–			*B. baileyi*	+
L. reflexa	–	*Dendrobium* Sect. *Ceratobium*		*B. nematopodum*	–
L. nugentiae	–	*D. discolor*	+	*B. macphersonii*	+
L. coelogynoides	–	*D. antennatum*	+	*B. aurantiacum*	+
L. condylobulbon	–	*D. nindii*	+	*B. johnsonii*	+
		D. semifuscum	+	*B. minutissimum*	+
Dendrobium Sect. *Dendrocoryne*		*D. canaliculatum*	+	*B. lilianae*	–
D. speciosum	+			*B. evasum*	–
D. ruppianum	–	Sect. *Phalaenanthe*			
D. gracilicaule	±	*D. bigibbum*	+	*Pholidota pallida*	+
D. adae	–	*D. dicuphum*	+	*Eria eriaeoides*	–
D. fleckeri	–			*E. fitzalanii*	–
D. tetragonum	+	Sect. *Trachyrhizum*		*E. irukandjiana*	+
Sect. *Latouria*		*D. agrostophyllum*	–	*Podochilus australiensis*	–
D. bifalce	+			*Thelasis carinata*	–
Sect. *Monophyllaea*		Sect. *Pedilonum*			
D. monophyllum		*D. smilliae*	–	*Rhynchophreatia micrantha*	–
Sect. *Rhizobium*				*Phreatia crassiuscula*	–
D. wassellii	+	Sect. *Grastidium*		*P. baileyana*	–
D. linguiforme	+	*D. cancroides*	–		
D. cucumerinum	+	*D. baileyi*	–	*Cymbidium canaliculatum*	+
		D. luteocilium	+	*C. suave*	–
Sect. '2'				*C. madidum*	–
D. lichenastrum	+	Sect. *Monanthos*			
D. toressae	+	*D. malbrownii*	–	*Dipodium pandanum*	+
				D. ensifolium	–
Sect. '3'		*Cadetia taylori*	–		
D. teretifolium	+	*C. maideniana*	+	*Vanda hindsii*	+
D. racemosum	+	*C. wariana*	+	*Luisia teretifolia*	+
D. mortii	+			*Phalaenopsis amabilis*	+
D. striolatum	+	*Flickingeria comata*	–		
D. beckleri	+	*F. convexa*	+		
D. pugioniforme	+				
D. rigidum	+	*Diplocaulobium glabrum*	–		

Schoenorchis densiflora	+		
Taeniophyllum malianum	+		
Robiquetia tierneyana	+		
R. wassellii	+		
Saccolabiopsis armitii	+		
Trachoma Subluteum	+		
T. rhopalorrhache	+		
Micropera fasciculata	+		
Pomatocalpa macphersonii	+		
Trichoglottis australiensis	+		
Thrixspermum congestum	+		
Mobilabium hamatum	+		
Plectorrhiza tridentata	+		
Rhinerihiza divitiflora	+		
Sarcochilus falcatus	+		
S. hillii	+		
S. ceciliae	+		
S. moorei	+		
Chiloschista phyllorhiza	+		

stomates, water vapour is free to diffuse out at the same time. Thus, if, during this time, the concentration of water vapour in the air around the leaf is low, ie humidity is low and evaporative power high, the plant will lose water rapidly. If water supply to the plant is ample and uptake by the roots and transport within the plant is sufficiently rapid, then it will not suffer water deficit. On the other hand, if the plant is growing in a water-deficient environment, the rate of dehydration sustained during diurnal stomatal opening, especially during the hotter, windier time of the day, may lead to plant water deficits that are unacceptable, even on a short-term basis.

However, if a plant growing in an arid environment can restrict the opening of its stomates to times when air humidity is high and evaporative power is low, water loss from its tissues will be proportionately reduced.

CAM in the Australian Orchids

The accompanying graph shows the course of a number of related environmental and physiological factors pertaining to a plant of *Dendrobium*

speciosum during a 24-hour period in autumn at Long Point near Armidale, NSW in 1980. The close relationship between stromatal opening, as measured by leaf diffusive resistance and atmospheric evaporative power, is evident. This also helps explain why CAM orchids are more prominent in the xeric upper canopy epiphytic environments.

A characteristic very common among CAM plants is leaf succulence and it is conversely true that many succulent species exhibit CAM. Two factors that relate to succulence, or possession of abundant water tissue, in CAM plants are, firstly, the general need to store water for future use (because of the water-deficient environment) and secondly, the need for an acid-dilution reservoir to store malic acid during the night. Thus, characteristics of leaf anatomy, may be indicative of CAM, as in the epiphytic, succulent species *Bulbophyllum aurantiacum* and *Phreatia baileyana*. In the former, the mesophyll cells are large and have relatively few stomates in them and there is a transition to the purely water-storing mesophyll cells beneath. This species is known to exhibit strong CAM. In *Phreatia baileyana*, however, the chlorophyll-bearing mesophyll cells are relatively small, compact and densely green and there is a clearly-demarcated water tissue above and below; tests show it clearly to be non-CAM.

Among the "truly Australian", Gondwanaland-derived orchids, of the subfamily Orchidoideae (of R.L. Dressler's recent classification system), which are all terrestrial, the few so far tested are clearly non-CAM. These include *Acianthus exsertus*, *Pterostylis obtusa* and *Thelymitra ixioides* and most species of these and related genera can be expected similarly to employ C3 photosynthetic CO_2 fixation. The reasons for this are not so much taxonomic affinity, but rather, ecological preferences and "herbaceous" leaf structure. They have developed a life-cycle in which they grow (vegetatively) during the cooler, wetter part of the year. This is autumn and winter, as typically applies in southern subtropical and particularly temperate Australia, where these orchids are common. They store nutrients and water in their characteristic stem-tubers which are insulated against heat and dryness by the soil.

Two species of terrestrial tropical genera having taxonomic affinities with Asiatic groups, which have been tested for CAM, are *Goodyera viridiflora* of the *Spiranthoideae* and *Calanthe triplicata* of the *Epidendroideae*. Both are non-CAM and their near relatives can be expected to be similar. Another epidendroid terrestrial, *Dipodium ensifolium* is also non-CAM but its congener, *D. pandanum* a hemi-epiphyte, gave intermediate results. Another aspect of CAM biology which is relevant to its occurrence among the Australian orchids is the facultative ability of some species to switch from the C3, day CO_2 fixation system to CAM night-CO_2 fixation and back. In the former, growth may be more rapid, so that when water supply to the plant is not limiting it may be better off not using CAM. When hard times come upon the plant, in the form of drought, either seasonal, irregular or "physiological" then CAM is obviously an important asset, even with its slower growth. This ability to switch has been well investigated in the Mediterranean terrestrial annual, *Mesembryanthemum crystallinum* (Winter, 1973) but has yet to be researched in orchids. However, preliminary indications are that some species may have this facultative ability. Species which may exhibit CAM, on the basis of intermediate results from carbon isotope ratio assays include: *Bulbophyllum elisae, B. johnsonii, Cadetia taylori, Dendrobium adae, D. gracilicaule, Dipodium pandanum* and *Flickingeria comata*. Further research is needed to properly establish the true nature of the photosynthetic CO_2 fixation pathway in these.

CAM and the Growing of Orchids

From the above and from some other research (McWilliams, 1970; Avadhani, et al, 1978, etc) indications are that the following are, or probably are, at least capable of CAM: most Sarcanthinae (monopodial or vandaceous orchids and relatives), *Dendrobium* sections *Spatulata (Ceratobium)* and *Phalaenanthae (ie hardcanes)*, *Cattleya* and *Laelia*. Those not possessing CAM include *Dendrobium* section *Eugenanthe* (ie softcanes) and *Cymbidium* (exc. fleshy-leaved spp.).

Points relevant to the growing of CAM orchids include the following:

a) high humidity at night is conducive to maintaining favourable water balance in plants actually employing CAM.
b) low humidity during daylight may not be detrimental to CAM plant water balance.
c) relatively high light intensities appear to be important to
   i. control and regulate the basic CAM stomatal mechanism and
   ii. effectively drive photosynthesis in plants with succulent chlorophyll-bearing tissue.
d) moderate night temperatures are needed for efficient carbon assimilation in CAM plants investigated.
e) moderately strong diurnal fluctuation of temperature favours CAM efficiency.
f) CO_2 is fixed during the night in CAM.

It must be borne in mind that CAM is a drought-resistance adaptation, that is, it enables plants to survive and to grow under adverse conditions of water supply. As mentioned above,

growth rates are much less under the system of CAM than under the "normal" (3 system, eg Kluge & Ting, 1978).

Thus, it may well be that under the more or less luxurious conditions provided by most growers, conditions favourable to CAM may not be very relevant to the good growing of even these species capable of CAM. On the other hand, it does probably confirm that CAM orchids under cultivation will not die from lack of water and further, enabling daily drying of plants to prevent fungal and bacterial disease, ie, growing CAM plants "dry", should not deleteriously affect their water balance.

REFERENCES

Avadhani, P.N., Goh, C.J. & Arditti, J. 1978. Stomatal and acidity rhythms in orchids: practical implications. *Bulletin of the American Orchid Society* 47:131-134.

Kluge, M. & Ting, I.P. 1978. *Crassulacean Acid Metabolism: Analysis of an Ecological Adaptation.* Springer Verlag; Berlin, Heidelberg, New York.

McWilliams, E.L. 1970. Comparative rates of CO_2 uptake and acidification in the Bromeliaceae, Orchidaceae and Euphordiaceae. *Botanical Gazette* 13(14):285-290.

Winter, K. 1973. CO_2 fixation metabolism in the holophytic species *Mesembryanthemum crystallinum* grown under different environmental conditions. *Planta* 114:75-85.

Dr Wallace is horticultural botanist at the Royal Botanic Gardens, Sydney.

New society at Hervey Bay

On the seventh of December, 1983 a constitution was adopted by The Hervey Bay Orchid Society bringing it into being. A month previously a public meeting had appointed Brian Pearce, Tom Parkin and Joan Joyce to draft a constitution and undertake all the necessary work to form the society. These three were subsequently confirmed as president, secretary and treasurer, respectively. These and other office-bearers and members bring a wealth of orchid-growing experience and administrative ability to the new society.

There were over forty foundation members, many of whom found it difficult to attend the meetings of the Maryborough Orchid Society, as the night drive of over thirty kilometres was not to their liking. Interest has been expressed by many other local growers and a rapid rise in membership is confidently expected.

The society meets at the CWA Hall, Bideford Street, Torquay at 7.30 pm on the first Monday in the month except for the annual recess in January. All orchid growers who visit Hervey Bay are cordially invited to attend the meetings. Many genera are grown by members and the plant table will always be a pleasing sight.

Enquirers please contact Mr G.J. Cook, Honorary Publicity Officer, Maryborough Road, Mail Service 763, Pialba, Queensland 4655.

OS OF NSW 50th JUBILEE

Photographic Competition

Entries are coming in well for this Orchid Society of NSW Golden Jubilee Photographic Competition.

Judging of slides takes place every two months. Last year's winners include Barry Long with three classes, G.F. Kenny with three and L. Colenso, R. Clarke, S. Popple with one each.

Winners in each bi-monthly judging receive a roll of Kodachrome 36 colour-slide film. The overall winner on July 15 next receives an Olympus SLR camera.

Entries should be on forms obtainable from Mr Wal Upton, C/- "Double U" Orchids, 71 Wesley Street, Elanora Heights, NSW 2101 or Miss Betty Oldfield, 61 Mountford Avenue, Guildford, NSW 2161. Entries should be returned to Mr Upton. Slides will be returned if a stamped-addressed envelope is enclosed.

There are six classes:

A. FOR ALL PHOTOGRAPHERS.
   i. "Orchids Artistic" — one or more orchids.
   ii. "Orchids In Situ" — one or more orchids growing naturally.
   iii. "Orchids on Show" — one or more orchids on exhibition.

B. FOR SOCIETY MEMBERS ONLY.
   As three classes in A.

There is a fee of 50¢ per entry which may be sent in stamps. Top entries will be published in *Australian Photography.*

Entries must be slides because colour prints rarely reproduce well.

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For four years this essential work for the understanding of Australian orchids has been considered out of print. Now twenty copies of this great classic have been found in a store where they were overlooked for fifteen years and have been donated to the Australian Orchid Foundation. Each copy has been signed by its famous author Mr Alick Dockrill.

The book describes every Australian epiphytic orchid known up to 1969 and every tropical terrestrial. Every described orchid is illustrated in great detail with accurate line drawings by the author.

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Warm growers in a cold climate

JOHN WOODWARD

A paper from the Seventh Tasmanian Orchid Conference of interest to growers in all cold areas.

It is a facet of human nature that we all want to do the more difficult, the more challenging and that which is contrary to the normal. So it is with orchids. In Tasmania we have a climate that while a little cool suits cymbidium orchids and those that originate in the cooler areas of our world.

So, of course we grow cymbidiums and not satisfied with that, we try to grow the tropical orchids — cattleyas, phalaenopsis and other exotic types. And will grow them with varying success. Probably at this moment, there is an enthusiastic orchidaholic standing, torch-in-hand, under 100 per cent shade cloth in sweltering Marble Bar with air conditioners at full blast checking the progress of spikes on his late-flowering and only-just-surviving cymbidiums.

The title of this presentation may give the wrong impression — there is no way that I know of growing heat-loving orchids cold. If we must grow them and there is always some keen to try — we can adopt one of three approaches.

The first is to rely on the orchid breeder to produce cooler-growing hybrids of the genera that we want to grow. This is being done but orchids by their nature are slower growing than many other plants and it takes many years and generations of hybridising (and hybridisers) to produce an end product that appeals to the average grower – usually the flower must be large, colourful and for our needs — hardy. Unfortunately most of the cooler-growing species are small, drab and appealing only to the enthusiast or collector.

In Japan, as you may know, Mr Yamamoto has done wonders in the breeding of large, colourful and hardy softcane dendrobium hybrids. Work is now being done, particularly in Australia, to produce cooler-growing hardcane dendrobiums with the size and colour of such as our native Cooktown orchid *Dendrobium biggibum.* These large-flowered, long-spiked and strong-coloured species and hybrids are being bred with the cooler species of southern Australia — such as *Dendrobium speciosum, D. tetragonum* and others and use is being made of the alpine dendrobium species from New Guinea. There has been some initial success and these hybrids can generally be grown out-of-doors in a climate like that of Sydney. However more work needs to be done to get more cold blood into the plants and improve the lasting quality of the flowers.

Paphiopedilums — the Lady's Slipper orchids — come in hot or cold and a fascinating range of shapes and colours. Much breeding is being done with the species to produce primary hybrids (ie first generation) that will grow under varying conditions with a tolerance to temperature fluctuation.

The genera *cattleya, laelia, sophronitis,* and combinations of these, plus infusions of *rhyncholaelia,* (syn. *Brassavola digbyana),* produce the large, perfumed and colourful American corsage orchids. Here again, it is the largest and showiest that generally only grow with heat provided. Many of the laelias, laeliocattleyas and sophrolaelias are grown here in Tasmania but the flowers are small due to the nature of the cool species used in breeding and in many cases only one or two flowers are borne on the bulb although there are some that produce attractive clusters and others with very long spikes bearing several flowers. What needs to be done is to breed the cooler species — particularly the larger laelias like *L. anceps* with the larger *Brassavola* types. This again is a slow process and it may mean starting from scratch (or almost) as the large modern hybrids will not breed readily with species such as *L. anceps.* We can live in hope but while the larger orchid houses are situated in warmer climates growing for the local market or for similar areas, little attention will be given to our needs.

Phalaenopsis are orchids dear to my heart and it is here that I have looked for ways to obtain cooler-growing types. Australia again is leading the way and breeding is being done again after a lapse of many years with native, cool-growing *Sarcochilus* and particularly *Sarcochilus hartmannii.* The resulting *Sarconopsis* as they are called will also grow cold in areas like Sydney. The flowers that these plants produce are slightly smaller than the large phalaenopsis, much rounder like the sarcochilus and retain the colour or patterns found at the base of the column in the sarcochilus. The growth habit usually follows the phalaenopsis.

Well, this as I said is one way to grow your warm orchids cool. The second is simple — and expensive, and that is to provide a heated growing house. There is plenty of information in orchid books to guide you on these lines so I won't elaborate other than to say that it can be successfully done in Tasmania at a price with off-peak

electric heating and a booster for those really cold days being the best approach to providing a suitable environment.

The third way is to grow your orchids indoors where your living conditions will have a ready-made environment for your orchids. "Growing orchids in the home?" is a question that will raise many eyebrows, even among experienced and professional growers in Australia. These gems though are grown indoors throughout Europe and North America where snow can surround the house for four months of the year. The journey from the humid jungles of the tropics or the pampas plains of far-off lands to your cosy living room is not a difficult one for the orchid — it certainly wasn't for all the other indoor plants that grow around our homes and most of these were former neighbours of our cultivated orchid species, and by implication — their hybrids.

Orchids are essentially of two types; the terrestrials that grow like most plants among the leaf mould and litter on the jungle or forest floor and the epiphytes that cling with wandering roots to limbs and branches in the umbrella of the trees.

In both these situations, orchids seek out a location of either strong or dappled light (according to their need) that receives rain in season to wash their roots with the minerals leached from decaying vegetation and humidity to protect their leaves from the drying rays of sunshine.

All of these conditions for growing can be provided in the home. You only need a heated greenhouse when your orchid hobby outgrows your living room, as it surely will.

The orchids that we are talking about here are not the beautiful cymbidiums that grace our bush-houses or plants too large for indoor growing, but those exotic specimens that produce flowers as large (or larger) but on smaller plants and in need of protection from the worst Tasmania's weather can produce.

Phalaenopsis (the moth orchids), cattleyas (the corsage orchids) and paphiopedilums (lady's slippers) are all particularly suited to indoor gardening. Let us look at phalaenopsis this time as these are the most popular of the three with the many large flowers produced on almost eternally-flowering stems. The others may produce one, two or three flowers of great beauty in their season, but cannot rival the moth orchids for a continual blaze of colour.

It wasn't long ago that phalaenopsis came in only three colours — white, pink and in-between. Now with breeding advances of the past ten years we have all shades of pink, lavender, purple, red, yellow, greens, browns and combinations of these with spotting, striping, stipling or bars.

Phalaenopsis, unlike many orchids, do not have bulbs in which they can store food or water against the vagaries of the season or home neglect. Their leaves provide this function to some extent as they are thick and fleshy. The plants grow ever upward on a single root base with oval leaves fanned out alternatively on opposite sides of the stem. It is from this stem that the flower spike emerges and on mature plants may carry around 20 or more flowers. Often more flowers are produced as those lower on the stem die. The flower stem may branch naturally or can be forced by cutting back to three or so joints (nodes).

One important requirement for growing phalaenopsis is warmth. It is this that determines where you grow them in the home. Minimum night temperatures of 18-20°C (65-70°F) are best. If kept a little on the dry side, slightly cooler temperatures will be tolerated though growth is slower. Unless you have a heated bathroom or kitchen, the living, rumpus or similar rooms provide the best location. Flower buds may drop if you have poorly-vented oil, gas, coal or wood heating so site your plant where air movement is good but not in a draught. Summer temperatures are not usually a problem in the home as 25-30°C is comfortable for these plants.

We force phalaenopsis to grow in pots. Their natural habitat is clinging to the trees so we must ensure that the 'compost' in the pot is quite open and free-draining. No soil is used and a blend of bark, charcoal and polystyrene chips is adequate to anchor the plant. Roots will wander outside the pot and this is quite normal. Green tips on these roots are an indicator of good growing conditions.

Phalaenopsis are not strong light lovers. A lightly-curtained window with filtered sunlight is ideal — but not too close to windows or plants will be damaged by cold through the glass at night. Remember — put your plant where it grows best, not where it looks best — plants in flower can be moved to that dull corner for decoration but must be replaced in their growing position after two or three weeks.

Food and water provide the other two essentials to moth-orchid culture. The media in the pot must be kept just damp and weekly watering depending on your room conditions is essential. Damp to the touch is just right. Wet and soggy will kill the plant. Once a fortnight, any good plant fertiliser can be included in the watering at half-strength. If the label says one teaspoon to the litre use a half-teaspoon. Humidity, too, is important — remember the jungle — and plants will appreciate an occasional misting in a warm

dry room. This is not usually sufficient in the home as air tends to be dry with heating appliances in use so plant pots are best stood on trays or saucers filled with gravel. These trays and saucers can then be topped-up with water to provide evaporation around the plant. Keep water levels below the top of the gravel and below the bottom of the pot or water will siphon into the compost and the mixture become too damp.

Pests and disease are not a serious problem with phalaenopsis and if any develop, treatment is the same as for other indoor plants. Do not spray flower buds. It is essential to keep water out of the growing tip of the plant (where leaves join the stem) as rot may develop under colder house temperatures.

The Queen of Orchids deserves her name, why not try a few moths in your indoor orchid garden. This is one moth with wings of colour without a caterpillar progeny.

Troweena Orchids
PO Box 72, Kingston, Tasmania 7150

Tasmanian OS Orchid Fantasia

This late October 1983 show was one of the best presented by the Tasmanian Orchid Society.

A feature was the number of attractive small displays by individuals, and two nice commercial displays.

The Grand Champion was *Cymbidium* Via Real 'Susan Hughes' which came from the Bushland Nursery Display. Troweena Orchids offset this by beating Bushland for Best Commercial Exhibit.

Reserve Champion went to a plant grown by Chris and Phil Nicholas, *Cymbidium* Clauboda 'Sydney Rothwell'. Their display was judged Champion Display and also awarded the Australian Orchid Council Plaque for Most Pre-Eminent Entry.

A special prize for a Golden Orchid went to *Cymbidium* Wallara 'Gold Nugget', grown by R. and M. Miller. Another worthy Special Prize for Most Improved Grower of the Year went to the husband and wife team V. and R. Duggan.

There were some very good entries from novice growers, some excellent foliage plants, and interesting floral art.

DAY MEETINGS A GREAT SUCCESS

At a meeting last year of the Wynnum Manly District Orchid Society the go-ahead was given to hold, on trial, three separate monthly DAY meetings on the 3rd Monday morning of each month at the Manly RSL Hall, Melville Terrace, Manly, Queensland.

Meetings were intended not only for orchid growers but foliage plant enthusiasts also.

The committee was overwhelmed by the success of the initial meeting and membership has grown.

Day meetings satisfy the needs of mothers with young children, the not-so-young who dislike going out at night and those drivers of not-so-tender years who find night driving a little hazardous.

The committee anticipates continued interest.

"Resupination in the orchids is a simple thing, and yet when we find it a rather universal trait it becomes more than a passing interest." — Oakes Ames.

Ira Butler Trophies for 1982

In the June 1983 issue of the AOR, page 117, an error was made in listing the ownership of *Den.* Peach Glow which had won its section of the OSNSW Spring Show of 1982.

Owners of this plant are Mr D. and Mrs J. Jones.

In the December issue a correction was made which compounded the error by listing the Jones' plant as *Den.* Hilda Poxon.

The winning Australian Native Orchid Hybrid of the OSNSW Spring Show 1982 was J. & B. Jones' *Den.* Peach Glow and it was awarded the Ira Butler trophy.

Mr Wal Upton's *Den.* Hilda Poxon was the champion of the ANOS Warringah Group's Spring Show and as such was awarded the Ira Butler trophy.

In addition Mr Upton's plant was judged as the Australian Native Orchid Hybrid of the Year — 1982.

John Stuart
Chairman of the Ira Butler Trophy Committee

Important correction

In the December issue the caption details for the cymbidium on the front page 267 (centre-spread) were transposed. The cover picture is of *Cymbidium* Rincon Fairy 'Pink Perfection', and the unregistered cross clone 'Infra Red' on page 267.

Details of the latter will be published when confirmation of registration is received.

Not the greatest boo-boo in world history but certainly the worst on the part of the editor for which he apologises abjectly to Mr R. Bailey and to Adelaide Orchids.

CATTLEYA POTTING CORRECTION

The article on page 204 of the September issue specifies using "... blood and bone which contains urea". (Page 204 under (c)). This should read "... blood and bone which does not contain urea."

NEW OFFICERS FOR DARLING DOWNS

Mr Bill Hartz is president of the Darling Downs Orchid Association with Mr Leon Young as vice-president and Mr Wayne Reis as treasurer. The secretary is Mrs Sue Stone, 12 Amos Crescent, Toowoomba, Queensland 4350. Members grow a wide range of genera. The association meets on the third Thursday of each month in the Scout Hall, Ruthven Street.

The association stages small but interesting shows. Fred Oelkers and Ron Williamson judged at the last Autumn Show and reported that some very unusual and seldom-seen plants were on display. One extraordinary one was the seldom-seen in Australia, *Oncidium lamelligerum* with a raceme nearly four metres long, carrying 65 8 cm-wide flowers. This plant was grown by Mr Wayne Reis. Show Champion was *Vuylstekeara* Cambris 'Plush', also grown by Mr Reis.

The Lure of the *Masdevallias*

PETER TAYLOR

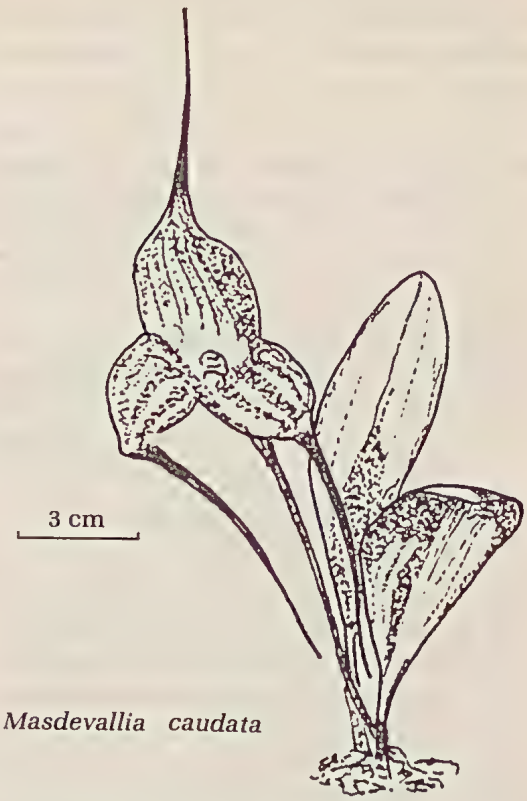
Masdevallia Ruiz and Pavon-

TRIBE: *Epidendreae*
Subtribe: *Pleurothallidinae*

Although choice species collections have always contained a few examples of the exciting genus *Masdevallia,* for long Australian orchid growers in Sydney have neglected them. They have the unwarranted reputation of being very difficult to grow, which caused most importers to shun them — also, they are difficult to get through our barbarous methyl-bromide quarantine treatment — or, they were simply overlooked by the conservative *Cymbidium* and *Cattleya* hybrid brigade as no-one knew how to judge them for awards.

Masdevallias are "plants as remarkable for the uniformity of their vegetation as for the diversity of form and colour displayed in their flowers" (Veitch, 1887:14). They are the most attractive member of the subtribe *Pleurothallidinae* and, at recent meetings of the Orchid SPECIES (NSW) have caused much comment. I thought therefore that a short paper on the history, distribution and culture of these small plants might be of interest.

History. H. Ruiz and J. Pavon, two Spanish botanists, were sent by the Spanish government in 1777 to investigate the forests of Peru. While in South America they compiled *Prodromus Florae Peruvinae et Chilensis* or, a *Preliminary Treatise of Flora of Peru and Chile.* In that, they named the genus as a dedication to Dr Jose Masdeval, a contemporary Spanish physician and botanist. The genus was based on a single species from Peru, *Masdevallia uniflora,* and when Dr Lindley published the third part of his *Genera and Species of Orchidaceous Plants* in 1832, only two more species, the beautiful *Masdevallia caudata* and *Masdevallia infracta* were known. By the 1860's Reichenbach could list thirty-six species and from that time the genus has grown to approximately two hundred and fifty species today. Extensive taxonomic work is presently being undertaken on the genus by Dr Carlyle Luer and H. Sweet. Their work is not yet completed and some controversy has arisen in their strict definition of the genus *Masdevallia* and their description of new genera such as *Dracula, Dryadella, Andreetaea* and *Triaristella.* Although I do not always sympathise with the 'splitters' in taxonomy I believe the above have sufficient morphological differences to be validly classed as separate genera. The most complete account of the genus *Masdevallia* to date is Kraenzlin's monograph of 1925. The most beautiful work is Florence Woolward's *'The Genus Masdevallia'*, published in 1898.



Masdevallia caudata

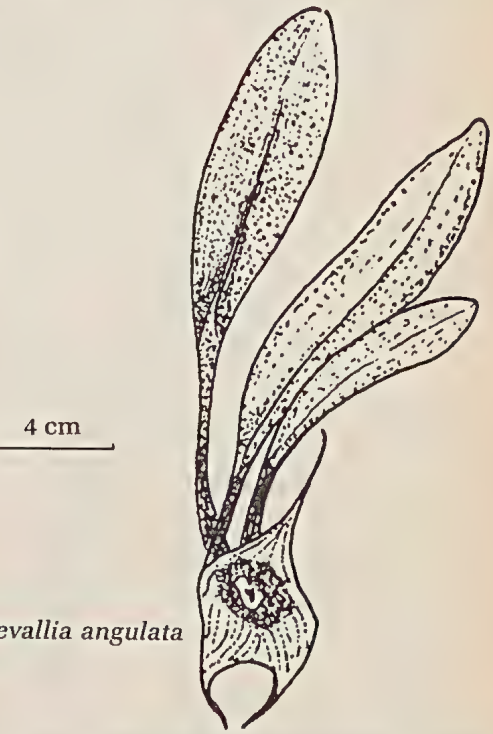
Hawkes describes *Masdevallia* as "one of the most unique of all orchidaceous genera, containing . . . plants which produce some of the most unusual and extraordinary flowers in the entire family" (Hawkes, 1965:281).

The plants are characterised by erect, fleshy leaves, usually broadest towards the apex. Size can vary from the tiny *Masdevallia muriculata* to the large *Masdevallia collosus* with leaves approximately twenty-six centimetres long. While the foliage is remarkably uniform and conservative, the flowers are "some of the most beautiful, most colorful and strangest — of the orchid family" (Northen, 1980:102). The most obvious and showy parts of the flower are the sepals which are connate at the base and the free portions usually terminate in short or long tails. The small and narrow petals are parallel with the column. The lip is small and articulated at the base of the column. The column is erect or arcuate, the pollinia two, waxy. The flowers are frequently very large in proportion to the plant.

The powerful evolutionary law of Natural Selection has determined that, in the genus *Masdevallia*, unlike the genera *Cymbidium* or *Laelia* which have large and showy lips and petals, the portion of the flower which enables the plant to be best adapted to its environment (species best adapted are those which have good reproductive rates) is the sepals. The variety of colour is extraordinary and often has an iridescence reminiscent of the hues in the plumage of humming birds. Surely this colour display has a powerful attractive force on the insect pollinators although they, like humans, also being attracted by shape and smell, are probably lured by a combination of physical factors. Members of the *coccineae* section of the genus such as *Masdevallia coccinea* and *Masdevallia veitchiana* are noted for their striking brilliant colour.

Distribution. Masdevallias are alpine plants, indigenous to Central and South American cloud forests. "While the greatest concentration is in Colombia and Ecuador, many are found in Bolivia, Peru, Venezuela and northward into Central America, ending in Mexico with *Masdevallia floribunda*" (Webb, 1982:243). They attain their highest range near their southern limit in Peru where they are found at between 2740 and 3960 metres (9000 and 13,000 feet). Their lowest range is north of the Panamanian isthmus where the mountains on which they are found have a lower average elevation. They are most prevalent in the cloud forests of the Colombian and Ecuadorian Andes where frosts at night are frequent and the moisture-laden Pacific air rises and cools as it passes over the mountains to form a heavy cloud cover every afternoon. Rain and mist constantly drench the vegetation but the air is never still and stagnant as in rainforests because in the cloud forests there is always a breeze.

In these mountains, masdevallias grow in a variety of situations — on the ground, in the crevices of rocks, on the trunks and branches of trees and particularly in the thick moss which grows on exposed tree roots. They never grow in soil. Helmut Schmidt-Mumm recounts his finding of *Masdevallias* (actually, *Draculas*) — "In order to reach these (*Pleurothallis* and *Oncidium* species on a cloud forest tree in Colombia), I climbed upon a cushion of moss into which I sank up to my knees. Immediately I noticed that I was treading upon many small plants of a species of *Masdevallia* — I collected a whole bagful of *Masdevallia chimaera* — about 11 o'clock the clouds descended and enveloped the woods in mist so that visibility vanished — a heavy rain set in" (Schmidt-Mumm, 1962:302). The *'Masdevallia' chimaera* referred to by Schmidt-Mumm, and other *'Masdevallias'* of the *'chimaeroid'* or *sacci-labiate* section of the genus have recently (1978) been elevated by Dr Carlyle Luer of the Marie Selby Botanical Gardens, to generic rank. The new genus, *Dracula*, contains some of the most bizarre and wonderful members of the *Pleurothallidinae* sub-tribe. I noted with interest that the authors of the recently-published *Manual of Cultivated Orchid Species*, Phillip Cribb and Edward Launert, chose to disregard Luer's research and conservatively refer to *'Masdevallia chimaera'* (Bechtel, Cribb, Launert, 1981:298).



Masdevallia angulata

However, the following from Luer seems sound — "*Masdevallia*, as typified by *Masdevallia uniflora* . . . is characterised by a solitary, more or less fleshy, coriaceous leaf . . . the leaves of *Dracula* are comparatively thin, sometimes even plicate . . . vegetatively the plants of *Dracula* are easily recognised . . . The most distinctive features of *Dracula* are the petals and lip, there being no similarities in the other genera". (Luer, 1979:705).

Dr Luer has also separated some of the charming miniature *'Masdevallias'* to a new genus, *Dryadella*, on the basis of their leaves differing from *Masdevallias* in having small, narrow, channelled fleshy leaves, and distinct flower difference, in *'Dryadellas'* having lateral sepals with a transverse callus below which they join, forming a mentum; the lip is also proportionally long and tongue-like. So former *'Masdevallias'* such as *Masdevallia lilliputiana* and *Masdevallia simula*, now reside in the genus *Dryadella*.

Culture. *Masdevallia, Dracula* and *Dryadella* species have similar cultural requirements and some excellent articles on culture have recently been published in the American Orchid Society Bulletin by Ronald Hawley (1979:661) and Marguerite Webb (1982:243). However, I have never seen material on *Masdevallia* culture in Australia, in general and the Sydney area in particular so the following may be of interest to growers of this amazing genus.

As their roots require a constantly-moist medium, I use plastic pots, preferably as small as possible to avoid a large mass of soggy medium breaking down with heavy watering and causing root rot. For a reason I can't adequately explain, my collection seems to grow better in black plastic pots, but perhaps it's just my imagination.

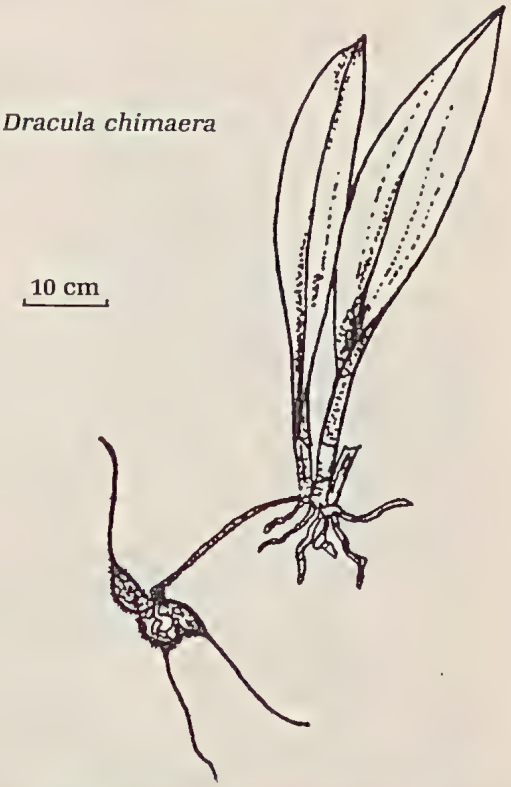
The potting media must provide excellent drainage and good root aeration. *Masdevallias* really enjoy a constantly moist but not 'boggy' media. I've experimented with a number of 'mixes' but have now settled on one of approximately one-half fine American fir bark and one-half combination of charcoal, larger bark, perlite and fine pebbles. To this I add a good amount of hoof and horn which gradually breaks down in the mix and provides these constantly-growing plants with a steady food supply. My heavy watering and frequent misting routine, using this mix, keeps the plants moist but not too soggy.

For *Dracula,* whose flower spikes are decumbent, culture in open baskets is essential. I make my containers from 6.5 mm (¼-inch) mesh which I wrap around various-sized tins to get different baskets. A small overlap of mesh can be easily hammered to form a base. The result is a neat, open container through which the decumbent spikes can easily grow. For this type of container I make a mix consisting of one-half of my standard mix and one-half sphagnum moss to provide extra moisture.

The genus does not require high light in order to grow well. Some species, such as *Masdevallia angulata,* have leaves with red pigmentation and need higher light intensity. When this *Masdevallia* has pink/green leaves it flowers well.

Good humid air movement is essential to their cultural welfare and, if grown in a glasshouse, fans are virtually obligatory. I've found that a small 20 cm fan mounted under the benches and directing a slight draught up through the mesh benches to the plants works best for me. This direction of moist air has enabled me to maintain my entire collection of *Masdevallias* (about 50 species) with very few losses even when the glasshouse temperature at the ridge was 43°C (110°F) on hot summer days! Obviously the plants don't like this heat but they survive to grow well and flower profusely in more clement conditions.

Frequency of watering depends upon the whole microclimate, including type of pot, media, light, air movement etc that you create for your plants. I water heavily once a week in winter and twice to three times a week in summer. I mist the plants nearly every morning.



The hoof and horn additive to the media creates a nice 'rich' mix but in summer I also fertilise once a fortnight when I water. I prefer to vary between organic fertilizers high in nitrogen and inorganic ones which provide the essential trace elements.

Whether you have a shadehouse or glasshouse, or both, I'm sure there is a position where you can create a little 'world' for some masdevallias. The following species are some of my favourites from the large and wonderful *Masdevallia* genus.

A SELECTION OF SPECIES

Masdevallia bicolor (Ecuador). Easy to grow and very floriferous. Each spike has two flowers. The small tubular flowers are chestnut brown with yellow tails. The leaves are approximately 7 cm long.

Masdevallia tovarensis (Venezuela). Its pristine white flowers which appear in two's to five's in a circular arrangement are among the most serenely beautiful of the genus. It was discovered

in 1849 at Tovar. A morphological peculiarity of *Masdevallia tovarensis* is that the flower spike is sharply three-angled. It is in this way allied to *Masdevallia ephippium, Masdevallia infracta* and *Masdevallia maculata.* Also, after the flowers wither, the spike continues to be green and fresh and more flowers are produced from the spike the following year.

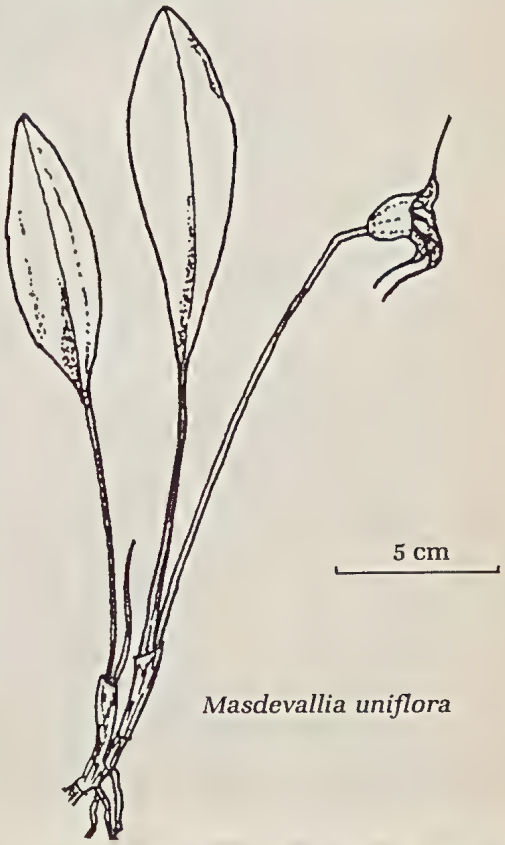
Masdevallia caudata (Colombia). One of the most beautiful *Masdevallias* and one of the first species of the genus that became known to Lindley in 1831. It has spoon-shaped leaves approximately 9 cm long. The flower is huge in proportion to the plant. The upper sepal is light yellow-spotted with red and with red veins. The lateral sepals are mauve-purple spotted with white. The sepal tails are yellow. The tiny petals are white and the lip pale mauve. It flowers in the spring. I find it not as easy to grow as some other species.

Dracula chimaera (Colombia). I include this wonderful *Pleurothallid,* although it no longer resides in the genus *Masdevallia,* because of its fascinating history and mesmeric flowers. It was originally discovered in 1871 by Roezel in the Province of Choco in Colombia. It was considered a member of the *Saccilabiate* section of the genus *Masdevallia* for one hundred and seven years. Dr Carlyle Luer elevated *'chimaera'* and others of the *Saccilabiate* section to a separate genus, *Dracula.* There are distinct morphological differences between *Masdevallia* and *Dracula,* sufficient to logically allow for a new genus.

The flowers are spectacular and arresting in their weird beauty. I think the most noticeable features are the 'hairy' sepals and the large lip partitioned into two. Some *Draculas,* like *Dracula chestertonii,* have a dangling labellum which "resembles a mushroom complete with gills" (Luer, 1979:705).

Masdevallia veitchiana (Peru). Perhaps the most brilliant in colour and certainly one of the largest-flowered of all *Masdevallias.* The metallic hue of the flower is due to the inner surface of the sepals being covered with minute papillae of a purplish-violet colour. The basic sepal colour is bright cinnabar-red. The flowers are approximately 9 cm long by 4.5 cm broad. The spike is about 30 cm in length. It was discovered near Cuzco, Peru and experiences a considerable temperature variation. From high altitudes, the intensity and heat of the sun is great, but the nights are always damp and chilly. Rain is frequent. Produce these conditions and you will grow this wonderful orchid well!

Masdevallia angulata (Ecuador). From the *Lentoglossa* Section of the genus, which requires a little more light than is normally given to *Masdevallias* to flower well. The leaves are very fleshy and about 16 cm long. The flowers are produced around the base of the leaves and are very striking — about 4 cm broad, they are basically pink-spotted and striped with maroon. It is easy to grow, not so easy to flower.



Masdevallia uniflora

Masdevallia uniflora (Peru). The type species of the genus *Masdevallia* found in Peru by Ruiz and Pavon. The flowers are a dusky pink with darker stripes; the tails are short and yellow. They are approximately 2.5 cm broad and are bell-shaped. The spikes are 15-16 cm long.

Dryadella simula (Brazil). This is a charming and easily-grown species of the newly-created genus, *Dryadella.* A well grown plant resembles a small cushion of leaves about 4-5 cm long. The flowers are on short 1.5 cm stems and sit amongst the leaves. Their colour is a dark cream-banded and spotted with red. This little orchid makes a delightful specimen plant when grown on a piece of soft, porous tree-fern and kept continually wet.

Masdevallia strobelii (Ecuador). One of the most charming species of the genus. The leaves are approximately 5 cm in height. The flowers are a rich orange-yellow with glistening white hairs and are about 2 cm in breadth. This miniature *Masdevallia* needs cool temperatures to

grow well but the bit of extra 'pampering' is well worthwhile as it is a spectacular orchid.

Masdevallia triangularis (Colombia and Venezuela). A member of the *Caudate* section of the genus. It is an elegant little plant and particularly free flowering. The leaves are tufted, approximately 9 cm long. The flower spikes are erect, about 10-11 cm long and one-flowered. The sepals, as the specific name indicates, are triangular and spreading. The flower is a tawny yellow densely spotted with purple, the tails are brownish purple. It is easy to grow.

Masdevallia picturata (Colombia). A miniature plant and one of my favourites. The leaves are only 5 cm long by 4 mm broad. It produces many flowers simultaneously — each bloom is comparatively large, approximately 2-2.5 cm across and is a delicate creamy white with lovely red spotting.

REFERENCES:

BECHTEL, H.; CRIBB, P.; LAUNERT, E; (1981) *'The Manual of Cultivated Orchid Species'*, Cambridge, MIT Press.

HAWLEY, R.; *'Dracula Culture in Coastal California'*, American Orchid Society Bulletin, Vol. 48, No. 7, July 1979.

LUER, C.; *'The Genus Dracula'*, American Orchid Society Bulletin, Vol. 48, No. 7, July 1979.

NORTHERN, R.; *'Miniature Orchids'*, New York, Van Nostrand Reinhold.

SCHMIDT-MUMM, H.; *'Masdevallia chimaera'*, American Orchid Society Bulletin, Vol. 31, No. 4, April 1962.

VEITCH, (1887); *'Manual of Orchidaceous Plants'*, London.

WEBB, M.; *'Some Cultural Suggestions for Masdevallias'*, American Orchid Society Bulletin, Vol. 51, No. 3, March 1982.

45 Peel Road, Baulkham Hills 2153

RESUPINATION AND SINGLE FLOWERS

In the bud, the orchid labellum is uppermost. As it opens, usually the flower orientates itself in relation to gravity by twisting its pedicel 180°. In this position the flower is said to be resupinate. A few orchids do not do this and they are said to be nonsupinate.

With single flowers on a stem such as *Lycaste* and *Paphiopedilum*, the stem may bend over, rather than twist, to achieve resupination. The weight of the flower brings the stem to an angle. With paphiopedilums this will cause the pouch to become horizontal relative to other segments, making it appear to stick out from them. To achieve a more pleasing position it is necessary to ensure that the stem is tied upright **before** the flower starts to open.

"Indeed, the diversity of orchids seems to be directly linked to the availability of pollinators: as the insects have the largest number of species of all animals, so those plants, the orchids, which rely on them for pollination have a corresponding and overwhelming diversity of species." — *The Manual of Cultivated Orchid Species.*

The Orchid

By a lass of fourteen years.

It uncurled itself towards the sun
So fresh, like a day still young
The leaves were so pale and green
Like a bird, with its feathers a-preen
Its flower's colours seemed painted on
Or tipped with a magic wand.

I vowed to give it the best of care
Provide it with water and clean fresh air
Not too much sun, a little shade
To keep the colours that will not fade
It had brought a sparkle whilst around
That little orchid, I raised from the ground.

Leanne Gall

ORCHID CLUB OF SOUTH AUSTRALIA INC
Awards for year to 30/11/83

No. 165 3.3.83 *Vanda* (Alex Bowmans x Rothschildiana) 'Ocsa', AD/OCSA. Grown by R. Job.

No. 166 14.3.83 *Slc.* Riffe 'Red December', AD/HCC/OCSA (77.5). Grown by Parade Orchids.

No. 167 7.7.83 *Paph.* ((Bonarda x Milionette) x Valwin) 'Houghton', HCC/OCSA (77.1). Grown by Johnstons Orchids.

No. 168 7.7.83 *Paph. fairrieanum* var. *giganteum* 'Ganesh Villa', HCC/OCSA. Grown by Johnstons Orchids.

No. 169 15.7.83 *Paph.* (Hellas x Green Gold) 'Houghton', HCC/OCSA (79.55). Johnstons Orchids.

No. 170 15.7.83 *Paph.* Faire-maud 'Pretty Polly', HCC/OCSA. Adelaide Orchids.

No. 171 4.8.83 *Cym.* Nancy Maxwell 'Shirley', CC/HCC/OCSA (75.1). J.W. Payne.

No. 172 4.8.83 *Den. teretifolium*, CC/OCSA. Grown by Mrs P. Meyers.

No. 173 4.8.83 *Paph.* Future World 'Galaxy', HCC/OCSA (76.12). Adelaide Orchids.

No. 174 15.8.83 *Cym.* Chocolada 'Triumph', AD/OCSA. Lambert Orchids.

No. 175 15.8.83 *Cym.* Yowie Flame 'Heather', AD/HCC/OCSA (75.6). Valley Orchids.

No. 176 15.8.83 *Cym.* Hearts of Gold 'Enfield', HCC/OCSA (77.22). Mick Ryan Orchids.

No. 177 25.8.83 *Cym.* (Fanfare x Cariga) 'Landseer', EA/OCSA. Grown by Mr and Mrs D. Dicmanis.

No. 178 7.9.83 *Cym.* Terama 'Robyn', AD/OCSA. Valley Orchids.

No. 179 18.9.83 *Cym.* Sally Alexandra x Colmaurin, HCC/OCSA (75.6). Grown by G. Forrest.

No. 180 2.10.83 *Cym.* (Bob Waabel x Jean Slattery) 'Sylvia's Surprise', HCC/OCSA (78.66). Tom Burian Orchids.

No. 181 2.10.83 *Cym.* Ruby Anniversary 'Pink Surprise', HCC/OCSA (75.77). Tom Burian Orchids.

No. 182 8.10.83 *Cym.* (Sleeping Beauty x Jean Slattery) 'Mary Smith', AD/HCC/OCSA (75.66). Bermar Orchids.

No. 183 3.11.83 *Phrag. caudatum* var. *gigantea*, CC/OCSA. Grown by Mrs E. Auliciems.

No. 184 3.11.83 *Paph.* Milmanii 'Vin Rouge', HCC/OCSA. Adelaide Orchids.

Superbly-flowered *Cymbidium* Pee Wee



Photos: W.J. Alcorn



Cymbidium Pee Wee is a cross of *C. madidum* and *C. pumilum*. The cross was registered by Mrs H.B. Ireland of Santa Barbara, California, in 1966. It has been remade by other hybridisers.

The pictured clone was grown by Mr W.J. (Bill) Alcorn of Maroochydore, Queensland, and was awarded a Highly-commended Certificate and a Cultural Certificate by the Sub-Tropical Orchid Council of Queensland.

Bill Alcorn is a brother of Fred Alcorn and like his brother is a fine grower of orchids. He has a large collection of cymbidiums and assorted genera.

The plant had seventeen racemes and a calculated estimate of 1,100 flowers. Not a flower was missing from any raceme, nor any flower marked. The single flower is enlarged to about twice size to show details.

The plant is in a 30 cm terra cotta pot. It has been grown under the same conditions as other cymbidiums. Miniature and intermediate cymbidiums have adapted well to the warm conditions of the Queensland Sunshine Coast. Particularly so where there is one Australian in the parentage, as in this case.

Cool-growing Masdevallia species and hybrids

Huge heating costs have led to world-wide interest in growing cool genera such as *Masdevallia*. The genus is a large one with a fantastic range in size, colour and shape. Most species are compact growers that display their flowers well. They come from the high-cloud forests of Central America, with the largest number of species centred in Colombia and Ecuador. They are also found in Bolivia, Venezuela, Peru and Mexico.

The genera Dracula, *Dryadella, Andreetaea* and *Triaristella* are closely related.



V *Masdevallia schroederiana*. A species from Peru. The illustration is slightly larger than life-size. This species was introduced to the English market by the Sanders nursery, and named for its first exhibitor, Baron Schroeder. The photo was taken at the nursery of Wyldcourt Orchids in Berkshire, England. Wyldcourt have a splendid collection of the genus.



gaining in popularity

< *Masdevallia burfordiensis.* One of the rarer species. Peter Taylor, whose article on the genus appears in this issue, describes it as one of his favourites and this particular clone as an outstanding form. The colour is unusual and is indicative of the wide range of strong colours found in the genus.

∨ *Masdevallia schlimii.* An epiphytic species from Venezuela and Colombia. Note that the flowers are held well above the attractive leaves. This was one of a wonderful display of masdevallias in the Edinburgh Botanic Gardens. Note the moist gravel on the bench. Also the clear labelling. These gardens are a delight to visit.

Individual flowers are about 10 cm long. The species was named after its discoverer, Louis Schlim by Lindley in 1846.





∧ *Masdevallia coccinea* var. *harryana.* Colombia is famous for its range of beautiful *Masdevallia* species, and *M. coccinea* in its many forms is one of the best known. The colour is variable but always intense. This illustration is from a photo taken at Wyldcourt Orchids and is about life-size.

A number of *Masdevallia* species and hybrids are available at some Australian nurseries. Watch AOR advertisements and send for the catalogues of nurseries specialising in exotic species.

Photo credits. *M. burfordiensis* photo by Peter Taylor. Remainder by Ronald Kerr.

PINK PAPHS



Paph. charlesworthii

Paph. charlesworthii is famous for breeding pink into its off-spring.

Hybrids from Paph. charlesworthii are compact growers with upright flower stems and flowers from small plants. Keep plants in small pots to improve root and plant growth.

Listed below are four Paph. charlesworthii crosses plus three other primary crosses all giving pink flowers.

The following seedlings crosses are now available in 5 cm pots.

$5.00 EACH OR 1 OF EACH (7 PLANTS) $30.00.

Paph. charlesworthii x Paph. curtisii
Paph. charlesworthii x Paph. Maudiea 'Colouratum'
Paph. charlesworthii x Paph. sukhakulii
Paph. charlesworthii x Paph. fairieanum
Paph. purpuratum x Paph. glaucophyllum
Paph. barbatum 'nigrens' x Paph. fairieanum 'Red', HCC/AOS
Paph. concolor x Paph. curtisii

'LIMITED RELEASE'

Paph. Delrosii

A limited number of plants are now available of the scarce, Paph. Delrosii. Considered by many as the best primary Paphiopedilum cross to date, plants have large flower stems, multi-flowering and pink/white flowers.

Flowering-size $30
2 Growth Plants $50
Extra Large (3 to 5 growths) $100
Freight extra on all orders.

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The *in vivo* propagation of *Phalaenopsis* orchids*

DR R.J. GRIESBACH

Florist & Nursery Crops Laboratory, USDA, Beltsville, Maryland 20705 USA

Abstract. **The exogenous *in vivo* application of hormones (50 mg/ml t cinnamic acid and 5 mg/ml 6-benzyl amino purine) to dormant nodal inflorescence buds can stimulate the development of these buds into shoots. The efficiency of *in vivo* propagation depends upon both the hormone concentrations and position of the bud along the inflorescence.**

Introduction. Many of the orchids with a monopodial-type growth habit are very difficult to asexually propagate. In the case of phalaenopsis, new plants can be produced by *in vitro* culturing the nodal buds from inflorescences (Griesbach, 1982; Reisinger, Ball and Arditti, 1976; Tanaka and Sakanishi, 1978). Because of the need for aseptic conditions, this technique may have limited use in industry.

There are now available several commercial hormone preparations which, when applied *in vivo* to the nodal inflorescence buds, can cause shoot development (Brasch and Kocsis, 1980). These hormone preparations, however, are seeing limited use because of their low success rate.

This study was undertaken to see if one could improve the efficiency of *in vivo* propagation of phalaenopsis via the *in situ* application of hormones to nodal inflorescence buds.

Materials and methods. Inflorescences on flowering plants of *Phalaenopsis* Betty Heuermann were cut back to the third nodal bud from the base (the fifth bud usually develops into a flower). The bract surrounding the third bud was removed and a hormone/lanolin paste was applied to the exposed bud. The hormone/lanolin paste consisted of various concentrations of t cinnamic acid (tCA) and 6-Benzyl amino purine (BAP) resuspended in liquid lanolin (Table 1).

After four to eight weeks, the buds developed into ½-inch inflorescences. One-eighth to quarter of the apex of these inflorescences were cut off and the remaining bases retreated with the hormone/lanolin paste. Several shoots then developed from each base. Roots naturally formed as the shoots matured.

Plants were grown in a greenhouse with a $80uEm^{-2}s^{-1}$ light intensity, a 27°C day temperature, a 21°C night temperature, a 40 per cent relative humidity and a natural spring photoperiod.

Results and discussion. It has been possible to efficiently propagate phalaenopsis through *in vivo* hormone applications to dormant inflorescence nodal buds. Using 50 mg/ml tCA and 5 mg/ml BAP, nine out of ten buds produced on an average of four shoots per bud (Table 1).

TABLE 1

The Effect of Hormone Concentrations on the Development of the Third Inflorescence Nodal Bud

Treatment[1]	% of Buds	Aver. No. of Shoots Per Bud
0.2 mg/ml tCA[2] and 0.002 mg/ml BAP[2]	0	No Effect
50 mg/ml tCA and 5 mg/ml BAP	90	4
50 mg/ml tCA and 10 mg/ml BAP	60	4
50 mg/ml tCA and 25 mg/ml BAP	50	2
50 mg/ml tCA and 50 mg/ml BAP	30	Lethal

[1]Ten buds/treatment.
[2]Concentrations used in *in vitro* culture.
In vivo means 'on the plant'. *In vitro* means 'in glass'.

The process involves two phases. During the first phase, the bud breaks dormancy and elongates into an inflorescence. The tCA, by acting as an anti-auxin, stimulates this development (Reisinger, Ball and Arditti, 1976). During the second phase, the three or four axillary buds at the base of the inflorescence are forced to develop into shoots. The development of these buds is stimulated by the removal of the apex of the inflorescence. The BAP also helps to induce shoot formation (Tanaka and Sakanishi, 1978).

The age and position of the nodal buds on the inflorescence determines their response in culture. For example, the basal buds from young inflorescences are capable of developing into shoots, while the same buds from mature inflorescences cannot be forced to develop into either shoots or inflorescences. The shoot-forming capacity is also determined by the placement of the bud along the inflorescence. Koch (1974) has shown that in *in vitro* propagation inflorescences usually develop from the upper nodal buds; while shoots usually develop from the lower nodal buds. The same is true in *in vivo* propaga-

*This work was supported by a grant from The Fred C. Gloeckner Foundation.

tion, for the treatment of nodes closer to the base can sometimes lead directly to shoots.

The procedure described in the Materials and Methods may not be the quickest, or produce the greatest number of shoots, but, it is the most reliable. Approximately 90 per cent of nodal buds treated developed into shoots.

REFERENCES

Brasch, J. and I., Kocsis, 1980. *You can meristem with hormones.* American Orchid Soc. Bull. 49:1123-1132.

Griesbach, R., 1982. *The use of indoleactylamino acids in the in vitro propagation of phalaenopsis orchids.* Scient. Horticulturae (In press).

Koch, L., 1975. Erbgleiche Vermehrung von Phalaenopsis in vitro. Gartenwelt, 74:482-484.

Reisinger, D., E. Ball and J. Arditti, 1976. *Clonal propagation of Phalaenopsis by means of flower-stalk node cultures.* Orchid Rev. 84:45-52.

Tanaka, M. and O.Y. Sakanishi, 1978. *Factors affecting the growth of in vitro cultured lateral buds from Phalaenopsis flower stalks.* Scient. Horticulturae, 8:169-178.

Is it a one-off?

GORDON HANSEN

The connoisseur's orchid at the Eighth Australian Orchid Conference must also be one of the rarest in the world. It was a pure-green *Cymbidium canaliculatum* in the fine display staged by Kevin McFarlane of Cairns.

Does anyone know of any other clones in the species with flowers of this colour?

Several clones which produce white flowers are known, including one at the D'Bush Nursery on the Atherton Tableland. But a pure-green form is unique.

Kevin's display was outstanding for quality blooms in striking colours, including the Show Grand Champion. Many viewers would have been so attracted by them that they missed the importance of this unique form of *C. canaliculatum.*

Kevin's photo of the raceme graces our front cover. The flowers are a clear green with a white labellum. There is no sign of pigment. The white labellum is also found in some other colour variations within the species.

Colour range within the species is wide, varying from the rare white to creams with red-brown markings to the very dark red variety *'sparkesii'.* And now this exquisite green.

The plant grows in the same pot as a dark form. It would be difficult to separate them without setting back both plants.

The potting mixture consists of several large pieces of charcoal, thus ensuring perfect drainage. In the bush the species grows particularly well in old dead trees where water can drain quickly down the hollow centre and the roots gain nourishment from the decaying core.

This plant has flowered for each of the last five years, always as a pure alba.

Such a unique plant should never be allowed to die out. Some attempts to self it have been made, but although pods set they were aborted at two months. But Kevin is not a man to give up easily so success must come.

2 Second Avenue, Eastwood 2122

ORCHIDS GO TO AIR

Like many of the flowers they grow, orchid growers are a widely-diversified crowd.

Recently a Sydney Local Community access Radio Station, 2NBCFM at Narwee in the south-western suburb of Sydney issued an invitation to local residents and clubs to submit programmes advising the community of their activities.

The Cymbidium Club of Australia approached the station's management to enquire whether a programme on orchids would be acceptable. The reply? Well, if a gardening session can go to air, why not one on orchids.

Great preparation was carried out to decide the format the programme should take — an encouraging station manager being an ex-orchid man was a great help — and who should participate in its presentation. Finally, an agreement was reached and the result was six 15-minute segments on orchids and how to grow them every week for six weeks.

Although the programme was arranged by the Cymbidium Club, the sessions included:—

1. The History of Orchids.
2. Cymbidiums.
3. Cattleyas and Paphiopedilums.
4. Native Orchids.
5. Orchids in Floral Art.
6. Questions and Answers.

Abe Porter, a well-known Sydney expert was anchor man for the series with Ray Deane speaking on cymbidiums, Bert Schwartz on cattleyas, George Colcroft on paphiopedilums, Ellis Smith on floral art, with Ellis Smith, Ray Dean and Abe Porter presenting the final question and answer session.

The programmes commenced on Friday, September 9 and concluded on October 14, all of the "cast" were making their debut, and many favourable comments were received by the station on the quality of each session.

The Cymbidium Club of Australia meets on the first Tuesday of the month at the Masonic Hall, Forest Road, Bexley. For information contact Mr Bill Keats on (02) 57 4402.

"... among the grasses, palms, lilies and irises, to mention only four of the forty-five families that constitute the monocotyledons, the orchids hold the loftiest position." — Oakes Ames.

Fine nutritional programme netts $900 for AOF

Mr Bill Johnson's paper on his nutritional research has resulted in raising $900 for the Australian Orchid Foundation. A magnificent effort indeed for which Bill deserves great credit. But Bill is not happy! He wants to make it $1,000.

The nutritional programme was submitted to AOR early in 1982 together with a proposal by Mr Johnson that he would like to make copies available as a means of raising money for the Australian Orchid Foundation.

Mr Johnson commenced nutritional experiments some years ago at his nursery. Then suddenly an article in *The Orchid Advocate* confirmed the way his developments were progressing and indicated many short cuts.

This article was titled *Nitrogen, Potassium and Magnesium Nutrition of Three Orchid Genera.* It was written by Hugh A. Poole and John G. Seeley, at that time of the Department of Floriculture and Ornamental Horticulture, Cornell University, Ithaca, NY. Originally it had appeared in the *Journal of the American Society* for Horticultural Science, Volume 103, No. 4, July 1978. It is reprinted in this issue and we make acknowledgement to the authors and journals concerned.

The value of the Poole and Seeley research, plus the clever application of its principles by Bill Johnson convinced AOR that the project to help the AOF was worthy of support. Accordingly an item was published in the June 1982 issue under the heading *Nutritional experiments of major importance* and the paper was offered in return for a few stamps and a self-addressed envelope. The cost of production 52¢ was deducted and the balance sent to the AOF. Enquirers were asked to donate something more for the AOF if they wished.

The $900 for AOF funds far exceeds expectations. It also indicates the wide circulation and influence of the *Australian Orchid Review.* Enquiries have come from all over the world.

ENLARGED NEW EDITION NOW READY

The original paper ran to a closely-packed ten foolscap pages. A second and third edition have been produced. The fourth is now fifteen pages.

The Poole and Seeley study accurately assessed the nutritional needs of cymbidiums, phalaenopsis and cattleyas. To apply these findings meant formulating nutrient solutions in the correct proportions. This is no easy task for anyone with no means of assessing the proportions and suitability of the ingredients in commercial fertilizers. Manufacturers show NPK ratios and trace elements in terms which comply with legal obligations, with few or no clues of its value for orchids. Growers tend to rely on the rule of thumb dictum of nitrogen (N) for leaf growth and potassium (K) for flowering, and be very vague about the role of phosphorus (P).

Bill Johnson studied stock fertilizers that were readily available on the Australian market, found those nearest to the Poole and Seeley optimums, and then worked out how to modify them in simple fashion.

Many growers have been using this nutritional programme for two growing seasons. Your editor has spoken with some of them and all have said they are more than satisfied with the results.

The new edition of the programme contains some interesting data on potting mixtures, pot temperatures and NPK ratios. There is an interesting section on methods of testing for various levels of N, P and K. Also a problem check list.

Mr Johnson states in this new edition that he has been using green fibreglass for five years and is satisfied with the results. Your editor's opinion is that any coloured translucent sheet, and particularly green, reduces light intensity by absorbing and reflecting parts of the light spectrum, and light control is best exercised by using clear glass or fibreglass with shadecloth. As with fertilizers no manufacturer has seen fit to make a detailed study on the subject. When authentic data becomes available AOR will publish it.

SEND FOR FOURTH EDITION NOW

Copies of the new edition of *Simple Nutritional Programme* can be obtained from Glenwood Orchids Pty Ltd, 18 Dandenong-Hastings Road, Cranbourne Rural, Victoria, Australia 3977.

Because of 50 per cent more pages and increased postage the new edition costs just four 30¢ stamps, plus a self-addressed envelope with 45¢ in stamps. All nett over printing cost goes to the AOF. It is suggested that you take this opportunity to add a donation towards the scientific work of the Australian Orchid Foundation. Cheques, money orders, or bank draft, or international money order, can be made payable to Glenwood Orchids Pty Ltd AOF account.

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Nitrogen, Potassium and Magnesium Nutrition of Three Orchid Genera[1]

HUGH A. POOLE[2] AND JOHN G. SEELEY[3]
Department of Floriculture and Ornamental Horticulture, Cornell University Ithaca, NY 14853

Reprinted from the Journal of the American Society for Horticultural Science, Volume 103, No. 4, July 1978.

Abstract: In nutrient culture, growth of hybrid plants of *Cymbidium* and *Phalaenopsis* was optimal with 100 ppm N, 50-100 ppm K and 25 ppm Mg and optimal for *Cattleya* with 50 ppm each of N, K and Mg. *Cymbidium* plants developed N deficiency symptoms when supplied with 50 ppm N. K levels tested had little effect on growth responses. Mg at 100 ppm decreased growth of all three genera in comparison to 50 ppm.

Recommended orchid fertilization programs have been quite varied and often confusing. Evers and Laurie (9), in nutritional studies on mature plants in gravel culture, concluded that orchids could be successfully grown in inert media as Haydite and silica gravel with periodic applications of chemical nutrient solutions. Scully (20) stated that orchid plants required little fertilizer because of their slow growth, but, Adams (1) recommended five different fertilizers monthly for best growth and flowering. Davidson (7) and Beaumont and Bowers (2) found that growth was more affected by fertilizers than by the potting medium. Fennell (10) observed best orchid growth in fir bark when plants were given liquid fertilization weekly. Poole and Sheehan (16) found that antagonisms among nutrients increased when *Cattleya* plants were fertilized more frequently.

Cibes et al. (4) in a gravel culture experiment observed that an increase in either N or K levels resulted in an increase in *Vanilla* vine growth, with the high-N, high-K level producing the best growth. Plants receiving low N were chlorotic and plants receiving high N had dark green colour. There was no apparent effect of K on foliage colour. Davidson (7) observed that deficiencies of N and P limited growth of *Cattleya* more drastically than did K, Ca or Mg in gravel culture and they were more likely to respond to applications of N and/or P. He reasoned that plants lacking an external supply of K are capable of translocating this nutrient from old tissues and re-utilising it to meet most of the growth requirements for K by new tissues. Likewise, Ca and Mg present in old tissues are re-utilised, but to a lesser extent than K. Small amounts of K, Ca and Mg often present in rooting media or water supplies appeared to satisfy the requirement of these elements for *Cattleya*.

This is the detailed study on nutrition by Dr Poole and Professor Seeley from which Mr Bill Johnson evolved a simple and successful way of applying its findings.

A further study titled *Mineral nutrition of orchids* can be found in *Orchid Biology—Reviews and Perspectives II*, edited by Professor J. Arditti. It has been written by Dr Hugh A. Poole, now of A and L Southern Agricultural Laboratories, Florida, and Professor Thomas J. Sheehan of the University of Florida. This study is highly recommended. The book is in some orchid society libraries.

Sheehan (21) reported that increased N fertilization levels resulted in an increased number of flowers on *Cattleya* 'Trimos' grown in hardwood bark media. In similar studies with *Phalaenopsis* hybrid seedlings, there was a significant interaction between types of barks and N levels. However, best growth generally occurred at the higher N levels. Davidson (6) suggested fertilizing every second watering with a 3—1—1 ($N—P_2O_5—K_2O$) ratio for fir bark since this medium was deficient in N due to a high C:N ratio. Lunt and Kofranek (12) stated that high rates of liquid N fertilizer applied weekly promoted vegetative growth at the expense of flowering in *Cymbidium* grown in two grades of fir bark.

Curtis and Spoerl (5) evaluated NO_3 vs. NH_4 sources of N at constant pH levels and reported that both ions were usable by orchid embryos. NH_4 was superior to NO_3 for *Cymbidium*, slightly better for *Cattleya* and inferior for *Vanda*. Lunt and Kolfranek (12) found more N in mature leaves, but no growth differences, of *Cymbidium* plants fertilized with $(NH_4)_2SO_4$ compared to those receiving Ca $(NO_3)_2$. Poole (14) found that Cattleya plants receiving NH_4 fertilization weekly had greater dry wt of roots and greater fresh wt and leaf area of new vegetative growth than

[1]Received for publication May 9, 1977. The authors gratefully acknowledge the Alexander R. Peacock and Jean Rolston Peacock Trust Fund for financial support for this research. This study is part of a thesis submitted by the senior author in partial fulfillment of the requirements for the PhD degree.

[2]Currently Assistant Professor, Department of Horticulture, Ohio Agricultural Research and Development Center, Wooster, OH.

[3]Professor, Department of Floriculture and Ornamental Horticulture, Cornell University, Ithaca, NY.

TABLE 1.
Main effects of N, K and Mg on growth responses of *Phalaenopsis, Cattleya* and *Cymbidium* orchids.

Genus	Response	Nutrient Level 25 ppm	50 ppm	100 ppm	200 ppm
			N levels		
Phalaenopsis	Dry wt leaves (g)		1.34a†	1.80b	1.60ab
	Dry wt roots (g)		1.26a	1.62b	1.37ab
	Leaf area (cm^2)		117a	153b	1.40ab
	Leaf span (cm^2)		18.1a	22.5b	20.8b
Cymbidium	Dry wt leaves (g)		6.06ab	6.68b	5.36a
	Dry wt roots (g)		2.73ab	2.79b	2.03a
	No. of leaves		11.6b	11.6b	10.6a
	Plant ht (cm)		51.4ab	53.4b	48.3a
	Leaf-tip die-back (cm)		5.4b	2.7a	1.2a
Cattleya	Dry wt leaves(g)		9.84b	8.15a	6.98a
	Dry wt pseudobulbs (g)		7.31b	6.46ab	5.73a
	Dry wt roots (g)		10.55b	7.83a	5.87a
	Dry wt flowers (g)		1.28b	0.95ab	0.56a
	No. of growths		6.4b	5.6ab	5.3a
	Leaf length (cm)		20.2b	18.7a	17.7a
			K levels		
Cymbidium	No. of leaves		11.5b	11.5b	10.8a
			Mg levels		
Phalaenopsis	Dry wt of roots (g)	1.54b	1.51b	1.19a	
Cymbidium	No. of leaves	11.7b	11.3ab	10.8a	
Cattleya	Dry wt leaves (g)	7.89a	9.34b	7.74a	
	Dry wt roots (g)	7.45a	8.78b	8.02ab	
	No. of growths	5.8ab	6.4b	5.3a	
	Leaf length (cm)	18.09ab	19.6b	18.1a	

† Mean separation in rows by Duncan's multiple range test, 5% level.

those receiving NO_3. Plants similarly fertilized at two and three-week intervals showed no differences in growth between the two N sources. However, plants receiving NH_4 at three-week intervals showed greater chlorosis of the leaves after 10 months of growth than did plants receiving NO_3. This chlorosis was probably due to an NH_4-induced K deficiency, resulting from greater antagonisms between the NH_4 and K ions at less frequent fertilization.

Sheehan (21) was unable to affect flowering of 'Trimos' *Cattleya* or growth of *Phalaenopsis* seedlings in three hardwood barks by varying levels of P or K. Poole and Sheehan (16) increased growth of mericloned *Cattleya* plants by increasing levels of K fertilization at low P levels. They also induced Ca deficiency and leaf-tip die-back symptoms of new leaves by increasing P fertilization and noted Ca deficiency among several orchid genera in the absence of Ca in the regular fertilizer program (16, 17).

Recently, Poole and Sheehan reported complete tissue analyses of various plant parts of *Cattleya* (18) and *Phalaenopsis* (19). These studies provide a reference point for further nutritional work with these orchid genera. In *Cattleya,* N and K decreased and P, Ca and, to some extent, Mg increased with leaf age. In *Phalaenopsis,* N and K content of leaves decreased dramatically with age while Ca and Mg increased slightly with age. Tissue analysis of new *Cattleya* leads showed that N, K and Mg were present in higher quantities than the six other elements tested. For short-term experiments, these three elements appeared to show the greatest promise for initial studies of elemental interactions and nutritional requirements of orchids.

The object of the present study was to study the effects of N, K and Mg on growth and chemical composition of orchids.

Methods and Materials: Three 3 x 3 x 3 fractional experiments in randomised block design with four replications were initiated to study effects of three levels each of N, K and Mg on growth and chemical composition of representative hybrid plants of three orchid genera: *Cattleya, Cymbidium* and *Phalaenopsis.* Plants were grown in 7.5-litre ceramic crock under nutrient culture conditions in a glass greenhouse, with 50 per cent shade from March 15 to October 15. Minimum greenhouse temperatures were maintained at 18°C (night) and 24°C (day). Plants were given supplemental lighting of 6.4-10.8 klx at plant height from 7.00 am to 7.00 pm, using General Electric Power Groove VHO-WW fluorescent tubes to provide a minimal amount of light

TABLE 2.
Main effects of N on elemental composition of *Phalaenopsis*, *Cattleya* and *Cymbidium* leaves.

Genus	N level (ppm)	Leaf concn (%) dry wt				
		N	P	K	Ca	Mg
Phalaenopsis	50	1.79a†	0.29b	7.19b	3.27c	0.61b
	100	1.92a	0.24a	7.30b	2.71b	0.51a
	200	2.26b	0.24a	6.68a	2.41a	0.48a
Cattleya	50	1.68a	0.21a	4.58b	1.47c	0.56b
	100	1.84b	0.20a	4.31b	1.30b	0.47ab
	200	1.97c	0.19a	3.85a	1.12a	0.37a
Cymbidium	50	2.06a	0.25a	3.06b	0.98a	0.30a
	100	2.25b	0.26a	3.02b	0.97a	0.33ab
	200	2.67c	0.28b	2.71a	0.97a	0.36b

† Mean separation in columns within genera by Duncan's multiple range test 1% level.

for active growth during the winter and dark weather. Each crock contained about 2000, 16 mm-diameter quartz glass spheres (Vitro Agate Co, Parkersburg, WVa). Eighteen-litre glass carboys containing nutrient solutions were connected to crocks and a compressed air source by neoprene tubing. Compressed air regulated by a manual valve was utilised to pump solutions to plants at 8.00 am, 11.30 am and 3.00 pm daily and about 15 minutes were required for complete drainage. Solutions made with distilled water were changed monthly in the *Phalaenopsis* study and bi-weekly in the *Cattleya* and *Cymbidium* studies.

Nutrient solutions were prepared with reagent grade chemicals, except technical monosodium ferric diethylenetriamine pentaacetate (Sequestrene 330 Fe), the Fe source. N was supplied at 50, 100 and 200 ppm; K at 100, 200 and 300 ppm for *Phalaenopsis* and 50, 100 and 200 ppm for *Cattleya* and *Cymbidium;* and Mg at 25, 50 and 100 ppm. The ratio of NH_4 to NO_3 was maintained at 1:3. Other essential nutrients were provided in the following ppm concn: P, 20; Ca, 200; Cl, 10; Fe, 3; Mn, 1; B, 0.25; Zn, 0.20; Cu, 0.025; Mo, 0.001.

Seedlings of a *Phalaenopsis* hybrid *P.* 'Linda Mia' x *P.* 'Bruce Shaffer' (donated by Rod McLellan Co, South San Francisco, CA), averaging 3.0 g fresh wt were planted on March 25, 1972, with one plant per crock. The experiment was initiated the following day and terminated January 1, 1973. The *Cattleya* and *Cymbidium* studies were initiated February 1, 1973, with one plant each per crock using mericloned plants of unknown hybrids (obtained from the Department of Ornamental Horticulture, University of Florida, Gainesville and Dos Pueblos Orchid Co, Goleta, California, respectively). The *Cymbidium* experiment was terminated October 30, 1973, and the following responses were measured: dry wt of leaves and roots, plant ht, number of leaves and cumulative length of necrotic leaf tips for each plant. For the *Cattleya* study, three-pseudobulb divisions were used and treatments were terminated January 23, 1974. Original leaves, pseudobulbs and rhizomes were discarded.

All plant tissues measured were analysed by standard laboratory procedures for N, P, K, Ca, Fe, Mn, Zn, Cu, B, Na and A1 but only the macroelements for leaves are reported in this paper (15).

Results and Discussion

Growth. N concn was the most important factor determining growth of all three orchid genera (Table 1) for *Phalaenopsis* and *Cymbidium*, 100 ppm N appears to be adequate or near optimal for best plant growth. *Cymbidium* grown with 50 ppm N had a greater incidence of leaf-tip dieback of the older leaves, probably due to deficiency of N. Plants with 200 ppm N were shorter, had fewer leaves and lower root dry wt than those receiving 100 ppm N. N levels between 50 and 150 ppm should deserve more attention for these plants. Sheehan (21) reported that best growth of *Phalaenopsis* seedlings occurred at the higher N levels when grown in different bark media. Lunt and Kofranek (12) also found that high rates of liquid N fertilizer applied weekly promoted vegetative growth of *Cymbidium* plants grown in fir bark media.

The *Cattleya* response to N levels was drastically different. Plants grown at 50 ppm N had greater dry wt of leaves and roots and larger leaves than plants grown at 100 or 200 ppm N and greater dry wt of pseudobulbs and flowers and number of growths than plants receiving 200 ppm N. Under the conditions of this experiment, 50 ppm N is near optimal for best growth of this hybrid. However, Sheehan (21) found that increased N fertilization levels resulted in an increased number of flowers on 'Trimos' *Cattleya* grown in bark media. These two studies would appear to be in conflict unless the 50 ppm N treatment in marbles supplied to the plant an

amount of N comparable to that supplied by Sheehan's high N treatment after a large percentage of applied N was used for microbial decomposition of the medium, suggests Davidson (6).

The K levels tested had virtually no effect on orchid growth. The only significant effect of K levels on the three plants tested was the *Cymbidium* with 200 ppm K having fewer leaves than plants receiving 50 or 100 ppm K. Sheehan (21) was unable to affect either flowering of *C.* 'Trimos' or growth of *Phalaenopsis* seedlings by varying K levels. However, Poole and Sheehan (16) were able to increase growth of *Cattleya* grown in tree-fern medium by increasing K levels at low P concn. Even at the low K level, K concn of all orchid tissues analysed appeared adequate and well above levels determined by Poole and Sheehan for adequate growth of *Cattleya* (18) and *Phalaenopsis* (19). An increase in plant growth would not be expected unless K had been deficient. Under these conditions, the 50 ppm K level appears to be adequate for good vegetative growth of orchids, although substantially higher amounts may not adversely affect plant performance.

Dry wt of *Phalaenopsis* roots and number of leaves of *Cymbidium* plants were adversely affected by 100 ppm Mg as compared to 25 and 50 ppm levels. In working with chrysanthemum cuttings rooted in peat having different levels of exchangeable Mg and Ca, Paul and Thornhill (13) observed that rooting decreased when exchangeable Mg was greater than 80 per cent. They also found that mist containing increased portions of Mg caused rooting failure in both sand and peat when the percentage of total cations was 70 per cent Mg. High Mg in the presence of high Ca, therefore, may have a direct effect on root growth of *Phalaenopsis* and an indirect effect on leaf metabolism in the *Cymbidium* plants. In *Cattleya* plants high Mg decreased leaf size and number of growths as compared to 50 ppm Mg. Thus, 25 ppm Mg appears to be near optimal for growth of *Phalaenopsis* and *Cymbidium* and levels of 100 ppm or more may be harmful.

Root dry wt of *Cattleya* receiving 50 ppm Mg was greater than those receiving 25 ppm Mg, and leaf dry wt was greater than with either 25 or 100 ppm. Mg at 100 ppm was antagonistic also to number of growths and leaf length. There are few reports on the effects of Mg levels on orchid growth. Chin (3) reported that omission of Mg severely reduced dry wt of *Dendrobium phalaenopsis* hybrid seedlings and Davidson (7) reported that a deficiency of Mg did not limit growth of *Cattleya* as much as deficiencies of N or P. The optimum Mg level for *Cattleya* appears to be 50 ppm rather than the 25 ppm as found for the other genera tested. This may be due to the greater biomass of the *Cattleya* plants, thus requiring more Mg for good growth. *Cattleya* plants of comparable size to the *Cymbidium* and *Phalaenopsis* plants may grow adequately at 25 ppm Mg. Regardless of size, however, 100 ppm Mg appeared to be detrimental to good root and/or vegetative growth of all three genera.

TABLE 3.
Main effects of K and Mg on elemental composition of *Phalaenopsis, Cattleya* and *Cymbidium* leaves.

Genus	Nutrient (ppm)	Leaf concn (% dry wt) K	Ca	Mg
	K levels			
Phalaenopsis	100	5.77a†	3.16c	0.59b
	200	7.49b	2.79b	0.54b
	300	7.92c	2.43a	0.46a
Cattleya	50	3.66a	1.44c	0.49a
	100	4.34b	1.29b	0.46a
	200	4.73c	1.15a	0.46a
Cymbidium	50	2.48a	1.05c	0.38a
	100	3.00b	0.91b	0.32a
	200	3.31c	0.88a	0.30a
	Mg levels			
Phalaenopsis	25	7.15a	3.20c	0.31a
	50	7.05a	2.86b	0.49b
	100	6.97a	2.32a	0.80c
Cattleya	25	4.26a	1.49b	0.29a
	50	4.32a	1.38b	0.50b
	100	4.16a	1.01a	0.61c
Cymbidium	25	2.88a	1.11c	0.21a
	50	2.96a	0.97b	0.31b
	100	2.95a	0.83a	0.47c

† Mean separation in columns within genera and nutrient level by Duncan's multiple range test, 1% level.

Foliar analyses. Increasing substrate levels of N, K and Mg significantly increased plant tissue concn of these nutrients. With only a few exceptions, increasing N levels resulted in decreased concn of K, Ca and Mg in foliage (Table 2). In *Cymbidium* leaves, significant increases of P and Mg occurred when N was increased in the nutrient solution.

The NH_4 form of N has been shown to adversely affect cation accumulation (7, 11). The slight increase in Mg concn of *Cymbidium* leaves may be due to lesser antagonism of NH_4 and Mg or a greater antagonism of NH_4 and K, permitting Mg to be absorbed concurrently with increasing NO_3 anions available in the substrate with increasing N levels.

Increasing K levels generally decreased concn of Ca and Mg in orchid leaves except for Mg content of *Cattleya* (Table 3). Increasing Mg levels increased Mg and restricted Ca concn of orchid leaves. The depressing effect of increasing supply and accumulation of one or more of the

major cations, K, Ca and Mg, on the accumulation of one another has been demonstrated with many plants (8, 11). Ammonium appears to be more effective in depressing K than the reverse in orchids. The only major exception to this relationship is where increments of N were associated with increased Mg concn of *Cymbidium* leaves. However, this may be explained by the lessening of the NH_4 antagonism to other cations in solution due to greater utilisation of the NH_4 form of N by *Cymbidium* plants, as was reported by Curtis and Spoerl (5) for germinating seeds and by Lunt and Kofranek (12) for mature *Cymbidium* plants.

Cattleya growth as affected by N levels. The dramatic reduction in growth of *Cattleya* due to increasing N levels was unexpected. For most crops, increments of N result in increased growth up to a point when N concn in tissues become toxic or other factors necessary for good growth become limiting. Since N increments drastically reduced growth of *Cattleya* with only a slight increase in N concn of leaves and a decrease in total absorbed N by the plant, the possibility that a limiting factor(s) is responsible appears likely.

With *Cattleya*, increasing N levels decreased growth of roots more severely than leaves or pseudobulbs. This could result from a decrease in synthesis of necessary carbohydrates by the leaves, translocation and/or utilisation of these carbohydrates by the roots. High production of organic acids, especially oxalic, would reduce the available pool of carbohydrates necessary for growth and would affect the roots severely.

Increments of N decreased the concn and total accumulation of K, Ca and Mg in leaves with the greatest reduction in Mg. Obviously, increments of N were detrimental to the accumulation of many of the essential elements as well as their total content in the plant tissues. If the concn of these elements are adequate or in the lower range of adequacy for the best-growing plants in the low N treatments, then such decreases could induce deficiencies of any or all of these elements. Oxalates may actually increase the requirements for Ca and Mg in the plant thus placing greater demands on an already diminished supply of these nutrients.

Further evidence of a deficiency or deficiencies causing the growth reduction or a portion of it is present in the Mg data for growth responses in this study (Table 1). When Mg levels were reduced from 50 to 25 ppm for *Cattleya* plants, a 42 per cent reduction in Mg concn of leaves and a 16 per cent decrease in plant growth occurred. This reduction in Mg concn is comparable to adding high N and it could account for approximately half of the growth reduction of leaves and roots caused by the high N treatment. K levels tested in this study did not result in a similar decrease in growth as Mg. However, impairment of carbohydrate synthesis, enzyme activities and changes in cytoplasmic pH due to increases in organic acids resulting from nutritional disorders could increase the demand for K and thus provide a growth response for K due to inter-relationships with other nutrients.

LITERATURE CITED

1. Adams, J.D. 1970. A tailored plan. *Amer. Orchid Soc. Bul.* 39:139-142.
2. Beaumont, J.H. and F.A.K. Bowers. 1954. Inter-relationships of fertilization, potting media and shading on *Cattleya* orchids. *Proc. Fla. State* Hawaii Agr. Expt. Sta. Tech. Paper 334:16.
3. Chin, T.T. 1966. Effect of major nutrient deficiencies in *Dendrobium phalaenopsis* hybrids. *Amer. Orchid Soc. Bul.* 35:549-554.
4. Cibes, H.R., C. Cernuda and A.J. Loustalot. 1949. Vanilla: Physiological studies. Puerto Rico (Mayaguez) Fed. Expt. Sta. Rpt. 1946. p. 36-38.
5. Curtis, J.T. and E. Spoerl. 1948. Studies on the nitrogen nutrition of orchid embryos. II. Comparative utilisation of nitrate and ammonium nitrogen. *Amer. Orchid Soc. Bul.* 17:111-114.
6. Davidson, O.W. 1957. New orchid potting medium lowers cost of production. *Amer. Orchid Soc. Bul.* 26:409-411.
7. ..... 1960. Principles of orchid nutrition. *Proc. Third World Orchid Conf.* p. 224-233.
8. Drosdoff, M., G.F. Potter, C.B. Shear and H.L. Crane. 1954. Tung nutrition. p. 727-757. *In* N.F. Childers (ed.) Mineral nutrition of fruit crops. Somerset Press, Somerville, N.J.
9. Evers, O.A. and A. Laurie. 1940. Nutritional studies with orchids. *Bimo. Bul. Ohio Agr. Exp. Sta.* 25:166-173.
10. Fennell, T. 1951. Food for thought on orchid feeding. *Amer. Orchid Soc. Bul.* 20:455-459.
11. Gilbert, S.C., C.B. Shear and C.M. Gropp. 1951. The effect of the form of nitrogen and the amount of base supply on the organic acids of tung leaves. *Plant Physiol.* 26:750-756.
12. Lunt, O.R. and A.M. Kofranek. 1961. Exploratory nutritional studies on *Cymbidium* using two textures of fir bark. *Amer. Orchid Soc. Bul.* 30:297-302.
13. Paul, J.L. and W.H. Thornhill. 1969. Effect of magnesium on rooting of *Chrysanthemum. Proc. Amer. Soc. Hort. Sci.* 94:280-282.
14. Poole, H.A. 1971. Effects of nutrition and media on growth and chemical composition of mericloned plants of *Cattleya.* MS Thesis. Univ. of Florida, Gainesville.
15. ..... 1974. Nitrogen, potassium and magnesium nutrition of three orchid genera. PhD Thesis, Cornell University, Ithaca, NY.
16. ..... and T.J. Sheehan, 1970. Effects of levels of phosphorus and potassium on growth, composition and incidence of leaf-tip die-back in *Cattleya* orchids. *Proc. Fla. State Hort. Soc.* 83:465-469.
17. ..... and ..... 1973. Leaf-tip die-back – What's the real cause? *Amer. Orchid Soc. Bul.* 42:889-895.
18. ..... and ..... 1973. Chemical composition of plant parts. of *Cattleya. Amer. Orchid Soc. Bul.* 42:889-895.
19. ..... and ..... 1974. Chemical composition of plant parts of *Phalaenopsis* orchids. *Amer. Orchid Soc. Bul.* 43:242-246.
20. Scully, R.M. 1951. Should orchids be fertilized? *Amer. Orchid Soc. Bul.* 20:137-139.
21. Sheehan, T.J. 1961. Effects of nutrition and potting media on growth and flowering of certain epiphytic orchids. *Amer. Orchid Soc. Bul.* 30:289-292.

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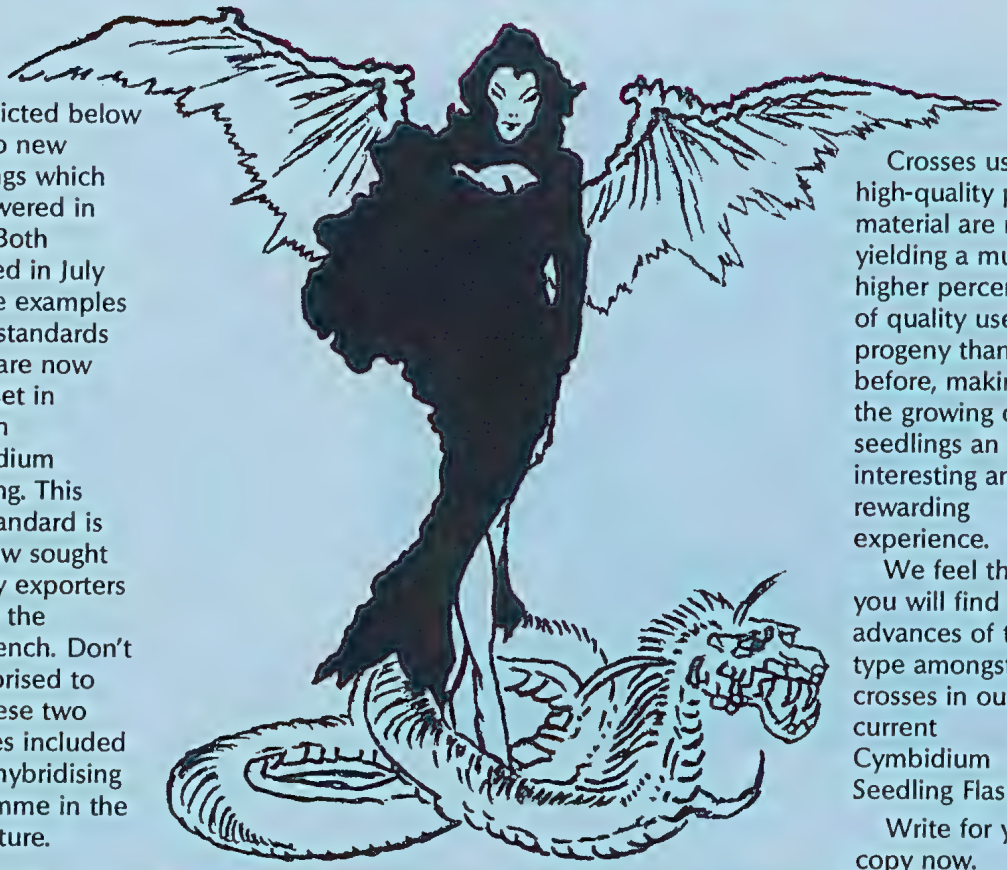
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Viewpoint on vandaceous intergeneric hybridising

KEVIN McFARLANE

From a paper given at the Ninth Australian Orchid Conference

The only prediction I can make regarding intergenerics in the *Vanda Phalaenopsis* alliance is an extremely bright future.

The need for selective breeding is most important — that means the selection of both parents with great care. On rare occasions, vandas reach a height of two feet before they flower and then only bloom once a year, so they are the first discards. The vandas I use flower at least twice a year and some three times, at variable seasons. To do that, means that they are also excellent growers. You can't cross a Clydesdale draught-horse with a Timor pony and expect to win the Melbourne Cup! The same rule applies to orchid plants. The process is too long to breed a lot of junk with little enjoyment for anyone.

I have read different reports of orchidists having growing and flowering problems with *Vandaenopsis* hybrids. In some cases the reports could be valid but I do feel that the authors could have written with reservation, as so much depends on the right selection of parents. I quote from one magazine — 'if you intend making intergeneric vandaceous hybrids, stay away from *Vanda* x *Phalaenopsis* as they take up to ten years to grow and then you have to wait an unspecified time to flower them'. We have now proved this to be totally false but, once again, it puts the emphasis on selective parents.

Fortunately for me, I hadn't read any of these fables prior to my crossings being well on the way to development. My two crossings of *Vanda* Varai Sun x *Phalaenopsis* Vivaldi and *Vanda* Varavuth x *Phalaenopsis* Cairns Centenary were flasked on January 30, 1978, green pod at 4½ months. One of each cross flowered within a week of each other on June 20, 1982. Taking into consideration the fact that they were in the flasks for twelve months, means that they took two years, five months to bloom from flask. I couldn't have been more happy with those times, as with anything new, we are usually over-cautious and inclined to do the wrong thing by molly-coddling. The plant growth doesn't resemble either parent but somewhere in between.

V. Varai Sun x *P.* Vivaldi flowering for the first time produced seven 10 cm blooms on the one spike plus a small branching spike. The blooms were nicely filled in — that was encouraging. The flower shape resembled more the phalaenopsis parent. The colour was an overall delicate pink with fine spotting.

V. Varavuth x *P.* Cairns Centenary was also a 10 cm bloom with seven flowers on the one spike. These blooms were barely filled in. The colour was of the palest blue lavender with light to dark purple spotting and an unusual cherry-coloured lip. The first flower on the second spike opened October 3, 1982. That makes it confusing and at this stage it is difficult to establish a flowering-season pattern. As the plants mature indications are that they could flower any time of the year, with the flush season being spring.

The second batch of the same cross came into bloom four months after the first two. Seven more clones bloomed, ranging in colour from off-white with purple spotting, to pink, to lavender background with fine to larger spotting. Their size was between 75 mm to giant 144 mm, mostly filled-in blooms. I was most impressed with the increase in the size of the petals. I felt this gave the flower better balance, as most vanda petals are a little small in comparison to the other segments.

All the plants that have bloomed to date are so interesting, we have kept the lot, at this stage culling is not considered. We have now established that by using selected parents, good shape can be obtained in the first generation. The future in this field has never looked so bright and we should now concentrate our skills on colour; mating plants such as *V.* Madam Rattana and *V.* Kasems Delight for solid red and red tesselation on to our best pink phalaenopsis. Amongst the blues, we could use *V. coerulea*, *V.* Gordon Dillon, *V.* Wirat and *V.* Varavuth plus good yellow vandas and ascocendas. There appears no end to a wider range of harmonious colour combinations that can be created. By not abandoning the conventional crossings of *Phalaenopsis* x *Phalaenopsis* and *Vanda* x *Vanda* but adding to the existing range of colours, including striping and spotting, I forecast a great swing to vandaceous intergenerics, once we show the way by exhibiting the final results at shows and by informing other growers of the comparatively simple ease of culture.

I feel substance is going to play a major role in the way plants pass on their finer points and influence the progeny. For example, if you use a papery flower of either parent, most of its character will be absorbed by the stronger parent with the waxy substance.

I will make a short comment on earlier crossings.

V. Gillian Trevor x *P.* Ruby Zada: the pod started to turn yellow and the seed was planted at 108 days. Germination of the seed wasn't very good and they were slow growers. Apart from two plants the batch was dumped. *V.* Gillian Trevor was again crossed with *P.* Karen Ann McFarlane and germination was average. These were also slow growers and only a couple of plants were kept. Our policy is that if crossings are very slow growers, we discard them.

One other local cross is *V. coerulea* x *P.* Robyn Stone. The *V. coerulea* was of good form and colour and the *Phalaenopsis* had fair shape. These are excellent growers with blooms up to 125 mm but are unexpectedly a very open flower of the palest lavender colouring with darker blue-lavender lip.

The charming *Aeridocentrum* Champatong was crossed with *P.* Linda Hunter. This cross appears to be cantankerous rather than slow-growing and the plant appears to direct most of its energy to the roots rather than the leaves. However, I'm so keen for this little beauty to impart its pure corn-cob yellow colour that it is well worth persevering. One plant is now close to flowering size.

The previous crosses were indeed experimental – finding out the fertility prospect, if they would grow and under what conditions. Dumping may have been premature as the fault of them not growing may well have been the fault of the grower, meaning myself. More favourable results might have been achieved with my present culture knowledge.

The next batch of the hybrids to bloom was a crossing of *V.* Madam Rattana x *P.* Abendrot. The first plant of the batch came into bloom on December 15, 1982. It was only a small plant and initiated the spike one year, five months from the flasks. There were four 80 mm blooms of overall pale pink colouring, on the spike. I do expect some good dark pink tessellated flowers when the main batch comes into bloom. The lateral sepals are broader and overlapping, unlike the other two crosses, the segments of the flower appear to favour the vanda. The substance of the bloom is also an improvement on previous crosses. These are showing a vigorous growth habit. Of course they were given a better chance of success by leaving them in the one potting medium. They were only repotted when they outgrew the pot, with many exploratory roots crying out for a larger pot. I recommend a 140 mm squat pot as the final container for the plant to flower in.

I crossed *Ascocenda* Doungporn to *P.* Abendrot the same time as making the *V.* Madam Rattana cross, using pollen from the same *P.* Abendrot. The growth of this cross is comparable to the vanda crossing for vigour. The flowering habit will be interesting to compare.

Culture. Unfortunately I was afraid of killing the plants in this new hybridising venture. I moved the seedlings from one potting medium to another, at most times giving the plants a set-back. The materials I experimented with were quincan gravel, peanut husks, coconut fibre, charcoal, empty clay pots and wooden baskets. I could have saved myself a lot of trouble as we have now proved that whatever material you grow your phalaenopsis in and they are growing well, grow your vandaceous the same way – feed and water with your regular phalaenopsis.

I believe in giving the plants a good start in the flasks so it is not uncommon to replate two or more times, grading the plants each time until they are large enough for individual pots. This not only gives the plants a good start but saves all that watering, fungiciding, etc. had you taken the plants out at an earlier stage.

What have we learnt from these experiments? A great deal, but most certainly there is much to learn yet. To say we have barely scratched the surface with vandaceous crossings would be sheer exaggeration, as the number of vandaenopsis hybrid crossings registered until 1980 was approximately twelve. That figure does seem incredible when the combination is so compatible. It is only a matter of time, with more people experimenting, to hit on the right combinations. The future for this type of crossings looks bright, adventurous and exciting.

In all instances the *Vanda* was the female parent.

26 Goodwin Street, Edge Hill, Cairns Queensland 4870

Doug Benson new *Phaius* editor

Phaius is the official magazine of the Tropical Queensland Orchid Council. Production and editing rotates between member societies.

Cultural articles of value to northern growers are featured. Also news of the council's activities.

Northern growers need *Phaius.* Members of any of the societies associated with the TQOC can buy a copy through their society at 50¢.

Doug Benson of Townsville Orchid Society is now editor. With his wide experience of orchids and enthusiasm for the job readers will be sure of helpful issues.

Doug is anxious to receive reports of cultural experiences from growers. Contact him at 10 Collins Street, Aitkenvale, Townsville, Queensland 4814.

"Although it is for their often exquisite flowers that orchids are justifiably valued, the diversity of their vegetative organs is no less remarkable."

Manual of Cultivated Orchid Species.

SOCIETY WISDOM

Being valuable excerpts from society bulletins.

The genus *Stanhopea*

Stanhopeas, in the main, flower in late Summer and Autumn but *S. anfracta* very often flowers in the Spring. This week I found the beginnings of four spikes on various plants of *S. anfracta*. But if I hadn't been actively searching for them, two of the spikes would never have seen daylight. Two spikes were projecting in orthodox fashion through the bottom of the basket; no problems.

But one spike set out horizontally, just below the surface of the compost and reached a spot where three wires of the basket came together. The flower spike tried to butt its way through, but only blunted its nose and broke its heart. My rescue operation was too late, I think.

Another errant spike blundered into the space between two sheets of the paper-bark and was simply following along the channel going nowhere and having no future. I broke the bark carefully and in no time the spike was happily through and moving downwards to flower. Moral: Watch carefully when *Stanhopea* spikes are due. They mightn't be bright enough to find their way out on their own.

J.B. Greer in *Manly-Warringah OS Bulletin.*

Odontoglossum pulchellum

This orchid must surely be one of the most rewarding plants that a beginner in Melbourne can start with.

Growing method is easily described. Shade and frost protection, water it without letting it completely dry and grow it in a terra-cotta or plastic pot; then watch it multiply and flower. Simple isn't it? First, acquire your piece of plant. That will be the hardest part ever. Within four or five years a specimen plant will result. Flowering usually occurs at this time of the year, with the spike emerging from the longest sheath bract, from the base of the pseudobulb. The flowers numbering five to nine or ten and are glistening white, very heavy texture, beautifully perfumed and upside down. Also the flowers are attractively displayed on the spike and can be quite useful for floral-wired work.

Neil Bathie in *Maroonah OS Bulletin.*

STAKING CYMBIDIUM SPIKES

When staking the cymbidium spikes, as much care as possible should be taken to minimise root damage. A **rounded** point on the stake will tend to slip over any root it touches rather than straight through it as would happen with a sharp point. Also, avoid putting the stake down alongside the edge of the pot, as this is where most of the roots are. It's better to risk damaging the odd root or two by putting the stake further in from the edge, than to most certainly damaging every root on the way down along the side of the pot.

M. Black in *Warringal OS Bulletin.*

A SAFE, EFFECTIVE INSECTICIDE

One of the most versatile insecticides available is based on pyrethrum and is highly effective against a wide range of insects yet safe to use around the home.

Pyrethrum is extracted from the flower of the pyrethrum plant and is harmless to bees.

It is available in aerosol form as Slay-Safe or as a spray sold under the name Pyrethrum. Both can be used on all types of plants — flowers, vegetables, shrubs and especially indoor plants. Exceptions are very young seedlings.

Insects controlled include ants, aphids, thrips, caterpillars and white flies. Both forms are fast-acting, knock-down sprays.

They also contain piperonyl butoxide, which is chemical that improves the knock-down effect. Pyrethrum works by paralysing the insect, which usually dies within thirty minutes. There are no known cases where insects have developed resistance to this natural insecticide.

Pyrethrum is decomposed by sunlight so it has no residual effect after two or three days. It should be used when insects first appear and applied again seven days later.

The few insects not controlled effectively by this can be killed by Malathion bug-aphis insecticide or complete garden spray.

Illawarra OS Bulletin.

DANGER

One question concerning ants in pots requires a grave warning. Please **DO NOT** use Dieldrin. It is a deadly poison and is indestructible and residual. An ant eats it and dies. A spider eats the ant and dies. A bird eats the spider and dies. A cat eats the bird and dies.

I am not sure that an ant could eat enough Dieldrin to kill a cat, but if the cat ate enough birds who had eaten enough spiders who had eaten enough ants who had eaten enough Dieldrin — well, who knows? The chances are, you got enough Dieldrin on your skin at the time to ensure that you are not around long enough to find out about the cat anyway.

The fact is, the old "water in the bucket" trick is quite the safest and most effective method.

M. Black in *Warringal OS Bulletin.*

PEST REMOVER

Home gardeners fighting a losing battle with snails and slugs may like my recipe that has proved 100 per cent effective for weeks without renewing baits. With any amount of watering it never loses its strength.

You need three parts cement, three parts bran, one part plaster of paris or lime, one part metaldehyde. Mix all together with water to a stiff paste spread evenly on a board or plastic, mark into one-inch squares and allow to dry thoroughly, when dry break into squares and store.

Place around the garden yards apart as snails seem to find it wherever it is laid.

May Dudarie in *Gladstone O & FS Bulletin.*

SOMETHING NEW: Found by Norm Hellier

A new multi-purpose spray for the control of scale and other insect pests has recently been released. This spray is Malascale Insecticide and is a composition product incorporating two effective and well-known insecticidal ingredients, Maldison and petroleum oil.

I won't bore you with what it will affect but some are certain scales, aphids, thrips, red spider and mites.

The spray should be applied when pests are first noticed and then repeated at fortnightly intervals if required.

Malascale is packed in 200 ml bottles, which is sufficient to make 16 litres of spray. The bottles are fitted with a graduated measuring cap to facilitate accurate measuring.

This, like all such sprays, is good to use but for heaven's sake read the side of the bottle, just to make sure you know what you are doing. One thing I hate is getting dressed to go to someone's funeral who didn't read the instructions.

Newcastle OS Bulletin.

THE PILL

A stopper or the maker of a whopper?

A lady came to me the other day and asked if I would break up a plant of *Stanhopea tigrina.* It was a monster of a plant with leads going every which way.

She claimed it was doing no good so she put it on the pill. When I looked startled she hastened to say — slow-release fertiliser pill — and for some strange reason I felt a sense of relief. So would you if you had seen the size of that plant.

Steve Seymour in *Newcastle OS Bulletin.*

"Those of us who have walked over the terrain that Schlechter worked in, know that it is incredibly mountainous and difficult of access." — G. Hermon Slade in his foreword to *The Orchidaceae of German New Guinea.*

Growing Australian terrestrials

At a meeting of the Native Orchid Society of Queensland, Joyce Leyden gave a talk on growing "groundies". She said that they were not as hard to grow as many think as long as a few guidelines are followed. Since most grow among rocky outcrops on the sides of hills, and also along the sides of gullies, and under bracken fern and tea trees, they require about 70 per cent shade and air circulation but not a lot of wind.

The potting mix Joyce uses consists of the scrub soil where they are found growing and sharp sand in equal proportions. An alternate mix would be 40 per cent loam, 45 per cent sharp sand and 15 per cent peat moss, plus blood and bone. On top of the pot Joyce sprinkles a layer of casuarina needles. Joyce fertilises with a mixture of epsom salts, Formula 20, Field Pack and Rogor.

While the plants are dormant the pots can be left to dry out for a month or so. At this stage the bulbs can be checked and any repotting done. However repotting is not always necessary. Once plants have started growing they should not be allowed to dry out.

— From the Native Orchid Bulletin

JUDGING ALTERATION

As the result of a postal vote by member State societies an amendment has been made. This applies to the General Standard on page 5, paragraph 1. The words "using the appreciation method" are to be deleted.

GOOD PLANTS FOR BAD

Dr Noel Grundon of the *Toowoomba Orchid Society,* with the help of members, organised a unique plant swapping which could well be followed by other societies. Members were invited to bring diseased plants to an open day. Any found to have virus were poisoned and destroyed and the owner received another plant in exchange.

Some plants were found to be affected by other ailments and the owners were advised how to treat them to ensure recovery.

With such positive programmes as these it is no wonder members of the Toowoomba Orchid Society have a high reputation for displaying beautifully grown cymbidiums at their shows.

ANTS IN POTS

Steve Seymour, writing in *Newcastle OS Bulletin,* and with particular reference to *Dendrobium speciosum* which often goes a long period before repotting, has this to say about eliminating ants from pots:

Submerge the pot in water so that the rim and compost are covered. Hopefully you will drown the egg laying queen ant.

The remainder of the working ants will climb out of the compost onto the foliage where they can easily be hosed off.

This method is the best when the plants are in bud when an anticide such as Chlordane would affect flowering. Take care lest too strong a hosing knocks off any buds.

Orchids Australia '86

In March 1802, Captain Matthew Flinders of the Investigator could have been forgiven if he had shaken his head at the prospect and folded his telescope without a second look. Certainly he passed it by with little mention and less excitement. Yet this was the site of Adelaide, unborn city that it was, future capital of South Australia.

In December 1836, the newly-arrived Governor Hindmarsh proclaimed South Australia.

During the relatively short time from proclamation to the present day, Adelaide has grown into a city of one million people, a city that has much to offer — location, size, climate, design and heritage. It is a pleasant place — an open, uncramped city between hills and beaches, with high skies, sunshine and space.

South Australia will celebrate its 150-year Jubilee in 1986. As part of the celebrations The Orchid Club of South Australia is hosting *Orchids Australia '86* — the 10th Australian Orchid Conference and International Orchid Show.

Orchids Australia '86 will be held in Adelaide from September 17, 1986 to September 24, 1986 and, although it is still over two years away, planning is well advanced. It has been announced that the theme for the International Orchid Show will be "Pioneering Times".

The South Australian Film Corporation have produced an eight-minute film promoting South Australia. This informative film from the producers of "Breaker Morant" and "Picnic at Hanging Rock" is available on 16 mm and 8 mm film or VHS and Beta video. If you would like to borrow the film, application can be made to *Orchids Australia '86.*

Fund raising is always a crucial area. The fund-raising committee of *Orchids Australia '86* have already held a 1,000-ticket, 50¢-lottery over a two-month period. The first prize was a flowering-size division of *Cym.* Peepers 'Santa Barabara'. If you would like details of future lotteries, please advise *Orchids Australia '86,* GPO Box 730, Adelaide, South Australia.

NZ International Orchid Conference

The Second New Zealand Orchid Conference is only eighteen months away. The dates for your notebook: October 9-13, 1985.

Many Australians attended the first conference and now look back on it as a memorable occasion. New Zealand scenery is so unique that it is well worthwhile planning for as long a stay as possible. Eighteen months gives you plenty of time to plan.

Start assembling those travel brochures now and picking your places to call.

Start or finish at the Conference. Starting there is best because you will get to know plenty of helpful New Zealanders eager to advise you on features of your ports of call.

The conference is to be at Wellington. Joint host societies are the Golden Coast Society and Wellington Orchid Society. They have set up a joint organising committee chaired by Mr W. Ross-Taylor, president of the Orchid Council of New Zealand.

The first conference attracted 800 registrants from all over. This large attendance plus good organisation made it truly international.

Facilities at Wellington, which is New Zealand's capital, are excellent. The Winter Show Building where the Conference is to be held is spacious with ample car parking, and is close to the centre of Wellington.

The Show will be competitive for societies and for individuals. As well as social and educational seminars there will be ample opportunities for registrants to meet and exchange ideas.

Registrants will be advised on available accommodation, with locations and price levels.

It is planned to have the proceedings printed and distributed before the end of the Conference.

Signify your interest by sending now for progress data to be sent. It will not place you under any obligation but will keep you informed. Write now to: The Conference Secretary, PO Box 5133, Wellington, New Zealand.

Coming events

Ninth Australian Orchid Conference. Outstanding event of 1984, September 12 a Wednesday, to Sunday 16th. Join the fun. For details write: The Secretary, 37 Elliot Street, Mordialloc, Victoria 3195.

Second New Zealand International Orchid Conference. Wellington, October 9-13, 1985. Enquiries: PO Box 5133, Wellington, New Zealand.

Seventh European Orchid Conference. March 23 to 26, 1985. Under the patronage and in connection with the Royal Horticultural Society in commemoration of the first orchid conference centenary.

Orchids Australia 1986. Tenth Australian Orchid Conference and International Exhibition. Adelaide September 17-24. Your host, the Orchid Club of South Australia.

British Orchid Growers' Association Show. Old RHS Hall, Vincent Hall, Westminster, London, March 20-21, 1984.

International Garden Festival. Liverpool, England. April to October 1984. The greatest horticultural event of 1984. Visitors to England should not miss this and also the famous Liverpool Botanic Gardens.

Orchid Society of Great Britain. Spring Show. Syon Park, Brentford, Middlesex, April 15, 1984.

Santa Barbara International Orchid Show. California at Earl Warren Showgrounds, March 30-31 and April 1, 1984.

German Orchid Congress Show. Krefeld, West Germany, March 23-26, 1984.

France. Show at the Parc de Vincennes, Paris, March 1984.

BOOK REVIEW

The World of Orchids

This book is a collection of articles by members and friends of the North Shore Orchid Society, published by the society.

Twenty-one of Australia's leading growers describe the culture of genera in which they specialise. One grower contributes a valuable article on solar heating, another deals with nomenclature and Reg Trenerry, who has been treasurer of the society since its foundation 33 years ago, gives a short society history.

All the writers are experts and what they have to say is vital data for new growers and with facets experienced growers will appreciate.

Lack of an index at first glance seemed a disadvantage, however each genus or alliance is so compartmentalised that in practice it is easier to turn to the appropriate chapter.

All the writers are growers of great experience and reputation. You will know most of these names: Fred Alcorn, Walter Upton, Roy Gifford, Doug Symons, Gordon Giles, Harry Spence, Kevin McFarlane, Bert Schwartz, Jim Cummings, Stan Condon, Peter Taylor, Roy Nurthen, Bernard Greer, Garrie Bromley, Gordon Lowndes, Robert Friend, Colin Blackstock, Weiner Diesel, Phil Spence, G. Hollingsworth, Jack and Fay Bygrave, Reg Trenerry and editor Murray Corrigan.

There are minor faults. For instance Walter Upton's excellent line drawings of Australian natives could have been placed around his article on native orchids or a cross-reference line included. Given the width of the column the typesize is a little small for easy reading.

There are nine colour illustrations of popular genera from slides of awarded plants. It is an oversight that the growers are not acknowledged, and unfortunate that the captions do not follow International Orchid Commission nomenclature. Abbreviations such as Bc. and Blc. would mystify beginners. Under the fine colour plate labelled Z. Arthur Elle the novice could wonder what Z meant. The correct name of the clone pictured is *Zygopetalum* Artur Elle 'Aranel', AD/NSW.

But the above are minor quibbles and are mentioned so they can be adjusted in a second edition when it comes due.

The book is recommended as a first-rate introduction to orchid growing. It is ideal for sale at shows and workshops.

Copies may be bought at any meeting of the North Shore Orchid Society at $4.95 each. Meetings are held on the first Wednesday of each month at Dougherty Community Centre, 7 Victor Street, Chatswood.

Postal orders can be sent to Mrs L. Bromley, 43 Ferguson Street, Forestville 2087, or to Mr R.E. Trenerry, 8 Bellambi Street, Northbridge. Enclose a cheque or money order for $5.85, the extra 90¢ to cover postage and packing.

Discounts for quantities are available to societies. Write or phone (02) 95 1087 Reg Trenerry for details.

SCHLECHTER IN ENGLISH

The Australian Orchid Foundation's English translation of *The Orchidaceae of German New Guinea* by Rudolf Schlechter is an essential work for any botanical library. Hybridisers wishing to use the exciting Papua-New Guinea species now becoming available will find it essential. The book is a massive 1,200 pages and includes all Schlechter's drawings. Price is $150 and leather bound $200. Post free. Enquiries to 107 Roberts Street, Essendon, Victoria 3040.

GREAT DAY AT MORNINGTON OS

Learn and meet people

On Sunday, April 29, 1984 the Mornington Peninsula Orchid Society, in conjunction with the Karingal High School will be conducting an all-day Orchid Festival, which we expect to be an annual event.

The day's activities will consist of lectures on many aspects of orchid culture covering many genera of orchids, practical demonstrations on potting, pest control, deflasking orchids and handling compot plants.

A display of autumn-flowering orchids will be staged by the MPOS, who will also provide a sales table of orchid plants.

Four commercial nurseries, comprising Glenwood Orchids, Hodgins Orchids, McBeans Orchids and Nindethana Orchids, will be attending and offering a large range of orchid genera for sale.

The purpose of the festival is to raise funds for Karingal High School, promote autumn-flowering orchids to the public and orchid growing generally.

Refreshments will be available. If country visitors advise that they are coming as a group, more substantial refreshments can be provided.

Admission will be $2.00 for adults, 50 cents for children and $5.00 per family (two adults and all the children in the family under 18 years) and what is planned at that price for a full day's entertainment is a bargain. Country orchid societies and/or garden clubs can arrange block bookings at a reduced admission charge for 10 or more persons.

Interstate visitors will be particularly welcome.

The venue is situated in Ashleigh Avenue, East Frankston. Commencement time is 10.00 am and closing time 4.30 pm.

For further details phone: Bill Johnson (03) 782 2668.

All's well at Mount Gambier

The 20th Annual General Meeting of the Mount Gambier District Orchid Society was held last year.

These twenty years spanned a wonderful era which has laid a sound basis for a promising future.

Like many other country societies it has suffered the tyranny of remoteness from the mainstream. Speakers from other societies have been rare and the influence of outside competition has been minimal. Members have depended upon slide showings supplied by the Australian Orchid Council to learn of the wider world of orchids. Last year there was only one guest speaker, Mr Ron Wells, from the South Australian Native Orchid Society, who gave a fine talk on natives.

At the annual general meeting Miss Mavis Franklin rounded off a remarkable twenty years as secretary and bulletin editor. Now Mavis has stepped down as secretary but remains as bulletin editor. A minute of appreciation was carried with enthusiasm at a task well done.

Miss Franklin has helped the society forward to a situation where it is now a force in Mount Gambier social life. There is an increasing interest in orchid growing throughout the district, due to the very successful orchid exhibitions held by the society.

Now a breakthrough in the isolation barrier promises to make orchid growing even more interesting for Mount Gambier growers, also for members of the new orchid societies in western Victoria. Following an enquiry by Miss Franklin, Mr A.W. Lanyon of the Hamilton Orchid Club expressed a desire to exchange visits. The two societies are only about 150 km apart. Hamilton already visits with Ararat Orchid Club, a 100 km to the east.

Queensland orchid societies think little of such distances. They hire a bus for a day, or even a weekend, then do a round of growing houses in the town of a society up to three or four hours drive away.

So the birth of new societies in western Victoria is bound to have a beneficial effect, resulting in a ready exchange of ideas, and appreciation of increased standards in culture.

The Hamilton Orchid Club was started over two years ago, and though few in numbers, the growers are very keen. Mr Lanyon grows phalaenopsis and has a large collection of cymbidiums.

Mount Gambier is the oldest society in South Australia outside the metropolitan area. In 1964 it became the first country society to affiliate with the Orchid Club of South Australia.

The president is Mr A.R. Burden, and the new secretary is Mr J. Shaughnessy of 30 Reginald Street, Mount Gambier, SA 5290. Mr D.A. Guerin is treasurer, and the inimitable Miss Franklin is bulletin editor.

Bulletins are well produced and packed with data of administrative and social interest, as well as facts useful to local culture.

A recent development is the formation of a panel of local judges for training and to look after monthly meeting night judging. Trainees are being instructed by Mr Wayne Gill who has been a member of the Orchid Club of SA judging panel in Adelaide. The Mount Gambier panel has the official blessing of the parent body. Any Australian judge passing through Mount Gambier would undoubtedly be welcomed by members of this panel.

Such society judging panels will be helped by the slide programmes now in preparation for the Australian Orchid Council. Each State judging panel is tackling a different genus, and the effort is being co-ordinated by Mr Gerald McCraith, the AOC programme director.

Mount Gambier will benefit considerably from their own efforts in initiating a judging panel, and also from the AOC judging programmes which should start to be available late in 1984.

The society meets the fourth Monday of the month, except during December and January, in St Martins Church Hall, Edward Street, Mount Gambier.

Visitors are always welcome. Growers who would be willing to pass on their knowledge by giving a talk or demonstration are invited to contact the secretary and arrange a suitable date. Adelaide or interstate visitors will find Mount Gambier a very interesting town to visit. Thrill to the famous Blue Lake.

The year 1983 has been a bountiful one for the Mount Gambier and District Orchid Society. Future years look likely to be even more interesting and rewarding.

TOWNSVILLE PLANT LECTURES

Townsville District Orchid and Allied Plants Association commenced a ten-week series of lectures on orchids and house plants through Adult Education. These are being held at the Heatley State School. They commenced on Wednesday, February 15 last and continue until May 2. For information contact secretary Mrs G. Musso, phone 79 2811.

"If nature ever showed her playfulness in the formation of plants, this is visible in the most striking way among the orchids." — Jakob Breyne in 1678.

Orchid People

Yvonne Black's many friends, and you will find them in all the orchid corners of Australia, will be gratified at the news that she is now a judge of the Tropical Queensland Orchid Council. Yvonne grows orchids, and many other plants, extremely well at her Townsville home. Over recent years she has built up an attractive small plants nursery.

It was Yvonne's eloquence at the meeting of the Australian Orchid Council at Hobart in 1979 which resulted in that august body breaking all precedent by awarding an Australian Orchid Conference for 1983 to Townsville. Good job they made of it too.

Speaking of Townsville those who have been there will remember hospitable Thelma and Mick Keith who have built up quite a nice nursery. Gordon Hansen told your editor not to miss seeing their *Hexisea bidentata*, a rarely-cultivated Central American species.

It only had a few flowers left by conference time, just enough to enable one to visualise its magnificence when it received a cultural award a few weeks previously. At that time it carried 85 inflorescences, averaging four flowers on each. The flower's segments radiate like star beams and all, including the labellum, look alike, hence the name from the Greek *hex* meaning six and *isos* meaning equal.

H. bidentata seems to be the only species of this small genus in cultivation. Mick has spent years building it into a specimen plant and won't part with a piece. One can't blame him.

It needs to grow on a slab, either cork or fern, is a compact grower and flowers frequently rather than annually. Snap up a piece if you can.

Mr Vic Smith is in his first year as president of Melbourne Eastern OS. Over many years Vic has given outstanding service to the society which has been recognised by making him a life member. With a hard worker like Vic at the helm the society is set to maintain its illustrious progress which, coincidentally, was largely initiated by another Viv Smith, now deceased, who was president for nine years in the 1960's.

Last year it was quite a thrill to see two large-scale spreads on the gardening page of the *Sydney Morning Herald* dealing with the wonderful gardens maintained by two prominent orchid growers.

Peter Hinds of the Parramatta OS has a fine collection of orchids, ferns and palms at his home near Mount Druitt. His growing houses look like a controlled jungle.

Peter is on the staff of Sydney Botanic Garden. Plants are his life.

Reg Trenerry has been treasurer of the North Shore OS since its founding 25 years ago and is a noted paphiopedilum grower and orchid judge.

His property at Northbridge is beautifully laid out with orchids, ferns and splashes of annuals.

Both growers maintain what Shirley Stackhouse of the *SMH* calls "gardeners' gardens". Congratulations Peter and Reg on this journalistic recognition of your prowess.

Andy Easton knocks himself down

The Devonport Orchid Society Newsletter reports an incident which may seem unusual but which is typical of Andy Easton. It took place after the Tasmanian State Orchid Conference Banquet.

"After dinner, Andy Easton, assisted by Melbournite Graeme Peterson auctioned off a flask of a miniature cymbidium hybrid, with added antics. The flask was the only one remaining of a batch that Andy bought to sell at the conference. As bidding reached $40 the crowd stayed motionless. Every move that Tom Henry made was recorded as a bid. The final bid was $50 — the proceeds Andy donated to the society. As to the purchaser . . . it was Andy himself!"

A WINNING COMBINATION OF BOWLS AND ORCHIDS

Bill Ross is notable as the President of South Brisbane Bowling Club and Brisbane Orchid Society. Bill has a big collection, mainly cattleyas, which takes up every iota of space in his growing houses.

Brisbane Orchid Society this year gave $3,700 to the School for Deaf Children, bringing its contributions to charity over the years to $21,000. South Brisbane Bowling Club is just across the road from the Greek Community Hall where the Seventh Australian Orchid Conference was held. Bill says it's the second oldest club in Queensland and the oldest still on its original site.

NEW LIFER AT SYDNEY ANOS

Foundation member of Sydney ANOS Group and long-time treasurer, Don Barnham has been made a life member. Don is a renowned grower of native orchids. He joins Lloyd Bradford, another foundation member, as a "lifer". Both have contributed substantially to making the group the industrious and stimulating body it is. Congratulations to both.

Last year the group staged its own Spring show. In previous years this had always been held jointly with Warringah Group.

Last October the 20th anniversary of the group was celebrated by a dinner at Brush Farm Bowling Club. Eight foundation members were present. It proved a night of fine food, fine company and splendid recollections.

NEW SECRETARY FOR MORNINGTON

Secretary of the Mornington Peninsula Orchid Society is Dr John Perry, 71 Mundy Street, Mentone 3149. Phone 584 9555. In such an active society John is bound to have a most interesting term of office.

The society meets on the fourth Friday night of the month at Karingal High School.

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A real mixture of colour for those who like something different.

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This striking yellow flower is one that will stand out in your collection.

Blc. MALWORTH SLIPPERS 'BRITT', AM/AOS

Another golden concolor orchid.

Lc. ROYAL EMPEROR 'WADE', AM/AOS

An outstanding red orchid with a golden eye in throat.

Blc. FAY MIYAMOTO x Blc. CHIEF JOSEPH

A lovely golden orchid with a gorgeous red labellum.

Lc. ADOLPH HECKER MISTY, HCC/AOC, OS/NSW

One of the finest mauve clusters available.

Blc. FRANCIS MILES 'LOVELY', AM/AOS

An orchid of excellent shape and texture comes to you in gold with a delightful red labellum.

Lc. SHELLIE COMPTON 'TOUCH OF CLASS'

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Show-bench whites.

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CLOSED SUNDAYS.

ANOS 21st Anniversary

July 1984 is the 21st birthday of the founding of the Australasian Native Orchid Society. It is proposed to celebrate by holding an Australian native orchid workshop on Saturday 7 and Sunday, July 8, 1984, with a buffet dinner being held on Saturday 7.

The workshop will be held at the Uniting Church Conference Centre "Naamaroo" situated in seven hectares of natural bushland adjacent to the Lane Cove River National Park, Sydney.

"Naamaroo" provides on-site accommodation in cabins, six for sixteen persons and six for twelve persons. All are divided into four roomettes and fully carpeted. The centre is fully catered with attractive meals of high standard and morning and afternoon teas and suppers are provided.

The guest speakers will cover a wide range of subjects of interest to all growers of native orchids and their hybrids. The speakers include Mr A. George, Mr L. Lawler, Mr R. Gifford, Dr N. Grundon — National Parks and Wildlife Service, Mr D. Cannon and others making a total of 13 speakers in all.

The workshop is being limited to 150 registrants and the cost will be $50.00 each, which includes all meals, morning and afternoon teas, buffet dinner and a copy of the proceedings. If accommodation is required the cost will be $60.00 inclusive of all the above.

Registration forms may be obtained by writing, enclosing self-addressed envelope to: ANOS, PO Box C106, Clarence Street, Sydney, NSW 2000.

WORKSHOP PROGRAMME

Saturday, July 7, 1984

8.30 am Registration.
9.15 am Introduction by Norm Hilliger, president, Australasian Native Orchid Society.
9.30 am Conservation of native orchids and licensing of private growers and commercial pickers. National Parks and Wildlife Service, NSW.
10.10 am MORNING TEA.
10.30 am Slab culture of native orchids. Mr R. Gifford.
11.15 am (a) Terrestrial orchids of Western Australia.
(b) *Rhizanthella gardneri*, the underground orchid.
(c) Preparing the orchidaceae for the Flora of Australia. Mr A.S. George.
12.15 pm LUNCH.
2.00 pm Growing requirements for native orchids (subject to confirmation). Mr D. Cannon.
2.45 pm Logging and conservation as it affects the private collector and commercial picker. Forestry Commission of NSW.
3.30 pm AFTERNOON TEA.
3.50 pm Flasking for the hobbyist. Mr L. Jarvis.
4.30 pm Fertilizers for Australian native orchids. Dr N. Grundon.
6.00 pm BUFFET DINNER — Speaker: Mr D.F. Blaxell.

Sunday, July 8, 1984

8.00 am BREAKFAST.
9.15 am Sarcochilus and their hybrids. Mr M.J. Corrigan.
10.00 am Orchids of Iron Range. Mr L. Lawler.
10.45 am MORNING TEA.
11.05 am To be advised. Dr B. Wallace.
11.50 am Pollination of orchids by insects. Dr D. McAlpine.
12.30 pm LUNCH.
2.00 pm To be advised. Mr K. Russell.
2.45 pm Question time.
3.10 pm END OF PROCEEDINGS.

NATIVE ORCHID SOCIETY OF QUEENSLAND

The Editor,

Just a note to let you know that at the recent AGM, Nev Bone was elected once again as president and myself (June Crane) as secretary. A position I enjoy because I get to hear of what the other societies are doing.

We as a society are looking forward to a new year. Among our members there seems to be a greater awareness of the terrestrial orchids with many more being tabled each month. Two of our top and keener growers must be John Roberts and Ralph Crane.

With the collecting of native orchids becoming more prohibitive, it is good to see members with seed pods on the rarer and harder to find orchids. We are lucky enough to have two of the members able to flask these seeds. It is a long, slow process, but the only sure way to have these orchids around for many years.

The last copy of the "Orchid Review" was one of the very best and most interesting. Thank you for the list of show dates, meeting nights and addresses.

Keep up the good work.

Yours faithfully,

June Crane (Hon. secretary)

NORTHERN DISTRICT OS NEW SECRETARY

Future correspondence should be addressed to Mr N. Risbey, 20 Firthville Street, Balcatta 6021. Phone 349 6164. This society meets on the fourth Monday at Alf Faulker Hall, Eden Hall.

REDLANDS OS AUTUMN SHOW

The 1984 Autumn Show will be held Saturday/Sunday, April 28 and 29, 1984 at the CWA Hall, off Shore Street, Cleveland. Competitive classes will be open to members only. Details for secretary Dorothy Skiggs, PO Box 116, Cleveland 4163.

MACKAY AND DISTRICT OS SHOWS FOR 1984

This active society has a new secretary and a full programme for 1984. Ms Estelle Baldock is secretary and may be contacted at PO Box 776, Mackay 4740. The society meets third Thursday, except December, at the CBC Hall, Gregory Street, Mackay.

The 1984 Autumn Show is to be held April 12, 13 and 14, Thursday to Saturday. The Spring Show is also over a Thursday to Friday, September 20, 21 and 22. A Field Day is being organised for Sunday, September 9.

Mrs Marge Purnell has again been elected president.

Pleione formosana

MARJORIE BLACK

Winter is the time to be on the lookout for dormant leafless bulbs of this species – a deciduous terrestrial from the mountain forests of Formosa (Taiwan). In spring new growths emerge and the larger bulbs produce delightful cattleya-type flowers to 8 cm which last two to three weeks. Mauve flowers are the most common but there are also shades of pink and a white variety 'alba'.

Many growers have this orchid and may well have bulbs to spare. A small bulb will reach flowering size in two or three years. It grows cold, takes up little space, and, can be grown in similar shade and position as cymbidiums, so, is well within the capabilities of any grower.

A shallow container such as a terracotta saucer is recommended and a suitable compost is:

1 part loam
1 part coarse sand
1 part leaf mould, peat moss, or cymbidium mix and, a little blood and bone in the mix, at the rate of 2 cups to 1 bucket (9 litres) of mix.

Plant the leafless bulbs high in the mix (the old roots will anchor them) and keep them practically dry until new growths appear, when watering can commence. Gradually increase the amount of water until growth is well on the way, and then maintain copious watering and regular fertilising during the growing season. When, in autumn, the foliage starts to brown, reduce watering and discontinue when only the bulbs remain.

Each new growth forms a bulb to replace the existing bulb which collapses and dries up in the dormant winter period. Very small bulblets will be found at the top of the old bulbs after the foliage dies down, and, if carefully planted out will grow on to flowering size in two to three years. The older bulbs can be divided and replanted in fresh mix in July/August after the rest period, or, immediately after flowering.

From the *Warringal OS Bulletin.*

IPSWICH CELEBRATES SILVER JUBILEE

Ipswich Orchid Society is 25 years old this year. To start the year the society has arranged for the sale of silver jubilee teaspoons and drinking glasses. The society emblem and the inscription "Silver Jubilee 1984" appears on the spoons and glasses. Celebrations will take place during the year.

TOP TROPICAL TOPIC

The Tropical Queensland Orchid Council is to stage its annual pleasurable conference at Bowen this year. As usual it will be held over the Queen's Birthday holiday weekend in June. Full data was not available at going to press but contact your local society.

US Professor talks on orchid scent

Members of several orchid societies in Australia were treated to a most interesting lecture by Professor Holman of the University of Minnesota. His research work covers, among other things, fragrance and flavour. Some of the research deals with the part fragrance plays in the survival of orchid species.

The professor has a growing house built as a leanto on the side of his house with the floor sunk to basement level so that it may be heated from the house-furnace system.

Basis of the research is to analyse the fragrances which attract pollinators. The orchid in flower is placed in a specially-built chamber with an absorbent paper which takes up the gases making up the scent. The paper is placed in a foil envelope and refrigerated pending analysis. As well as collecting his own fragrances Professor Holman received samples from all over the world.

By allowing the temperature to rise under controlled conditions the gaseous scent is analysed in a gas chromatograph which draws a graph showing the various components. Observations in the field have shown that in some cases where the fragrances were similar the flowers were visited by the same insect pollinator.

Some plants give off an odour from the roots, different parts of the flower give off odours different to a degree, and some plants have fragrant leaves. All appear to play a part in the attraction of the pollinator.

Results indicate that fragrance could be used as a factor in taxonomy – the classification of the species.

The professor showed a slide he had taken by lying on wet ground of the North American native *Cypripedium calceolus.* On the flower stem was a mosquito, and on the mosquito a mite. A case of the biter being bitten. This caused Professor Holman to think about trapping mosquitoes using the perfume of *C. calceolus* as bait. But if mosquitoes were eradicated would the orchids die out?

Abridged from QOS Bulletin.

WOLLONGONG NATIVE SOCIETY

The Wollongong and District Native Orchid Society has a new secretary, Mrs D.E. Gillis of 42 O'Briens Road, Figtree, NSW 2525. Any reader wanting information on this active society can contact Mrs Gillis by phoning (042) 28 4898.

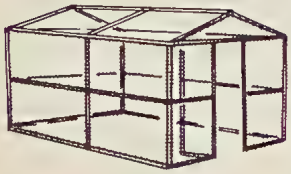
"The great advantage of growing orchids on blocks or in baskets, is that of being able to get the plants near the glass, there they may reap the full benefits of the sun and light." — *Williams Manual*



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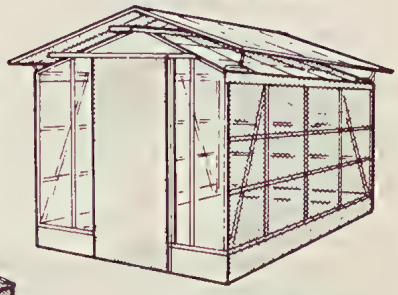


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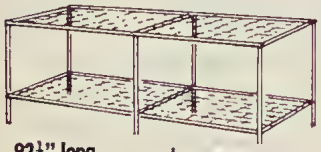
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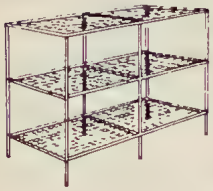
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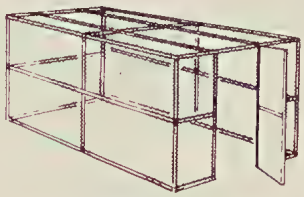
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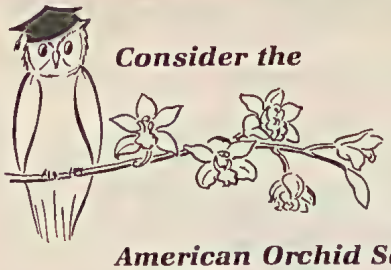
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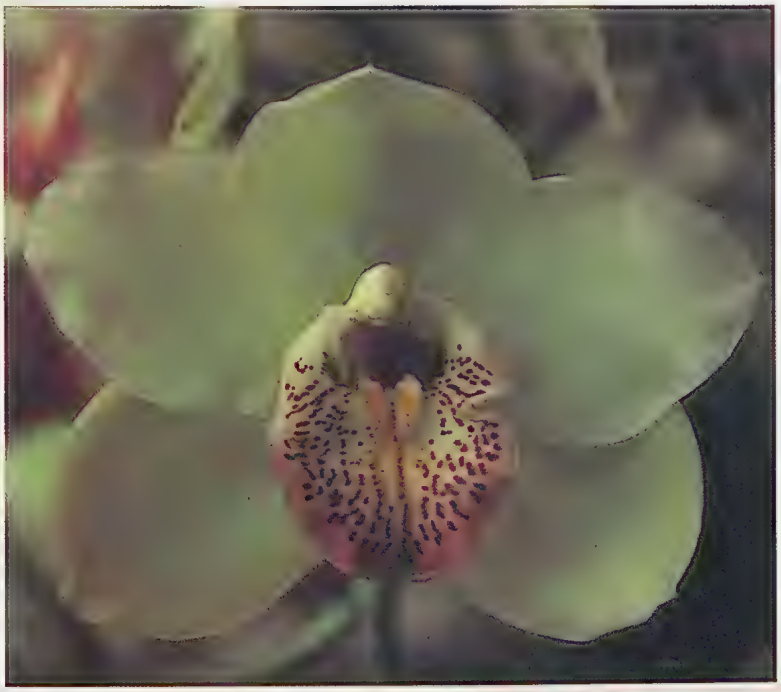
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Vol. 49, No. 2 $4.50 (New Zealand $5.50)
June Quarter 1984
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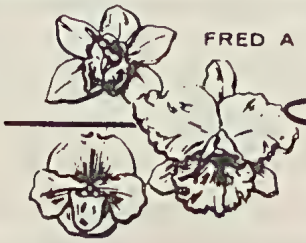


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AUSTRALIAN Orchid REVIEW

JUNE QUARTER
Vol. 49 No. 2

Printed and Published by:
GRAPHIC WORLD
14 McGill Street, Lewisham 2049
560 6166

- **Editorial Associates:**
QUEENSLAND: Mr Frank Oelkers, 419 Robinson Road, Geebung 4034.
VICTORIA: Mrs I. Hutchins, 37 Elliot Street, Mordialloc, Victoria 3195.
SOUTH AUSTRALIA: Mr N. Lenkic, GPO Box 730, Adelaide, SA 5001.
WESTERN AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154.
TASMANIA: Mr C. Nicholas, 7 Kelvin Avenue, Moonah, Tasmania 7009.
INTERNATIONAL: Mr G. H. Slade, Box 797, Vila, Vanuatu.
- **Editor: Ronald Kerr.**
- **Editorial Committee:**
R. KERR, G. HANSEN
A. B. PORTER, R. MILLER
- **Address Editorial to:**
R. KERR, 260 Geoffrey Road Chittaway Point, NSW 2259 Phone: (043) 88 2605
- **Advertising, address to:**
ELIZABETH LOWE, 14 McGill Street, Lewisham, NSW 2049. Phone (02) 560 6166
- **SUBSCRIPTIONS.** 1984. Within Australia $15.00. Overseas surface $16.50 (Australian). Airmail rates on request.

TO JOIN AN ORCHID SOCIETY
Contact these secretaries:
NSW: Miss B. Oldfield, 61 Mountford Avenue, Guildford 2161.
QUEENSLAND: The Secretary, GPO Box 2002, Brisbane. Phone: 377 3253.
VICTORIA: Mrs I. Hutchins, 37 Elliot Street, Mordialloc, Victoria 3195.
SOUTH AUSTRALIA: Mr D. J. Harris, 36 East Avenue, Black Forest 5035. Phone: 297 7525.
WEST AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154. Phone: 330 2132.
TASMANIA: Mr J. F. Smith, 11 Warren Court, Howrah 7018. Phone: 44 1555.
NORTHERN TERRITORY: Mr A. McGregor, PO Box 38493, Winnellie 5789. Phone: 81 8436.

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To comply with the International Code of Botanical Nomenclature the whole of a species is in *italics* and the second term has no capital. With hybrids only the first term is in *italics,* the second starts with a capital and is not latinised. Generic names, used in a non-botanical sense do not have a capital nor are they in italics. In society bulletins and on place-cards italics can be indicated by underlining.

COVER STORY

March is our worst month for flowering in Australia. Nonetheless many growers did their best to provide blooms for the Eleventh World Orchid Conference. Thanks are due to them. Others collected, packed and despatched the flowers. Thanks are due to them. Barry Collins and his crew assembled them at Coconut Grove, Miami. Thanks are due to them. Northern hemisphere societies with the benefit of flush flowering time were able to do better but ours was a creditable display and we showed Australia's flag. Again many thanks to all those who helped.

Golden Years

This year marks the golden anniversary of two great Australian orchid societies.

The Queensland Orchid Society was formed early in 1934 and the Orchid Society of New South Wales only a few months later. The Victorian Orchid Club preceded them by eleven years, being formed on May 7, 1923.

Queensland Orchid Society. The original meeting was convened by Mr E.J. Beard, who became the founding president on January 24, 1934. Mr V.W. Moller became the first secretary and treasurer.

On the founding committee was Mr Cecil Harveyson. Later he was secretary for many years. Mr Harveyson figured prominently in the founding and administration of the Australian Orchid Council.

Mr C.T. White, then government botanist, became technical adviser to the new society and later served a term as president. He was a grandson and apt pupil of the famous Frederick Manson Bailey who, while colonial botanist of Queensland wrote the comprehensive *Queensland Flora* which contained 78 pages on orchids.

Mr White was noted for botanical art and work on Queensland and New Guinea orchids.

Prominent early members were Messrs W.L. Haenke, V.W.A. Moller, A. Beckley and Sir John Chandler. The well-known orchid writer Mr J. Murray Cox was a long-time member of the QOS and a frequent contributor to the AOR.

Important contributions to the society over a period of many years have been made by Messrs Dick Searle, Jim Mackinney and Ron Williamson. All three are currently still very active.

The growth of many orchid societies has been ably assisted by the QOS. A strong judging panel has helped promote quality standards throughout the State. New societies are being formed. The Queensland Orchid Society is set for another wonderful fifty years.

Members of the society marked the occasion with a Fiftieth Anniversary Dinner.

Orchid Society of NSW. The society had a long gestation period. Sydney growers such as Messrs N. MacDonald, J. Bisset, C. Cambourn, H. Trinder, L. Hawley, T. James, G.H. Slade and Dr A. Burstal, used to meet for orchid discussions in each other's homes.

Formal founding of the society took place on August 7, 1934. His Honour Judge H.J. Markell became the first president. The two vice-presidents were Dr C.A. Jaede and the distinguished orchid taxonomist the Rev H.M.R. Rupp. Mr T.H. James became the first secretary.

An anniversary dinner is to be held on Tuesday, August 7 in the restaurant at Randwick Racecourse. It is expected that two founding members Mr John Bisset and Mr G. Hermon Slade will be present.

In addition the 1984 Spring Show is to be the Golden Anniversary Show.

A gold commemorative medal will be awarded the grand champion and additional classes have been added.

The *Australian Orchid Review* was established in January 1935, largely through the efforts of Mr G.H. Slade and his father. Mr Slade had two long terms as editor, as did Mr P.A. Gilbert. Messrs Bill Worth and H.J. Lawler were editors for about two years each. For the last twenty years the journal has been edited by Mr Ron Kerr.

The naturalists Mrs Pearl Messmer and Mr F.A. Weinthal were early members. Both have orchids named after them.

Growers of the early years who contributed substantially to the society's growth included Messrs A.G. Hamilton, L. Meech, K.D. Lamont, J.C. Davis, Dr H. Poate and Dr J.A. Vote.

Major supporters over many years have been Messrs John Nicoll, treasurer for thirty years, A.B. Porter, a past-president and on the committee for over thirty years and Lou Sasso. The latter served two terms as president and is famous for the quality of his growing and show displays.

An early hybridiser was Mr W. Schmidt who made the cross *Dendrobium* Ellen. This was only the second Australian native cross to be registered.

President Mr Leo Giles obtained world recognition for Australian hybridising by his work on cymbidiums. His hybrids suited the early demand for export flowers, a field pioneered by members Mr J. Mitchell and Mrs Enid Pendigast.

Current member Mr Alvin Bryant has continued to keep Australia in the forefront of world hybridising. Members Mr and Mrs John Gulbis are current leading exporters.

A major contribution to Australian orchidology was made by Sir John Hall Best in 1960. As president of the society he brought about the creation of the Australian Orchid Council as co-ordinating body for all Australian societies. This made possible the holding of regular Australian conferences and participation in world orchid conferences. This led to the Sixth World Orchid Conference being held in Sydney, in 1969.

Outstanding shows have been a feature of the society's existence. Countless numbers of the public have enjoyed them.

Fertilizer deficiencies and orchid nutrition

W.R. "BILL" JOHNSON

While testing a range of commercial plant food products over the past few years, and comparing their components it became obvious no two were alike, and yet, each manufacturer claimed that his product would perform equally as well as any other. Those variances must indicate that either the claims could not be accurate, or, plants are extremely tolerant to incomplete, and/or unbalanced fertilizer formulae.

Modern research tends to suggest that orchids will produce optimum growth if the fertilizer is accurately balanced. That being so, we need to understand the nature of commercial fertilizers and correct for any deficiencies.

If, as research by Poole & Seeley[1], et al, has shown, the balancing of the elements in plant nutrition plays a key part in optimum plant growth, and that balance will vary from genera to genera, then we have a sound case upon which to base a claim that fertilizer formulae must be more accurately formulated for orchids, and perhaps other plants too.

The variation in the contents of the products I reviewed was so great that one could be forgiven for wondering how each manufacturer concluded that their product was suitable for orchids and just what research they had done on the subject before recommending their product to be used on orchids.

There can be no one nutrient formula that will suit all living plants and that has been known for many decades so it would appear that this information has been ignored and that it is more a case of "pour some chemicals into a packet and advertise it as being suitable for orchids" just to expand the market for that product.

Orchids show their preference for specific conditions by the fact that they are most selective where they grow and it must be obvious that their requirements will be somewhat different from other plants because of their unusual habitats and what their environment would supply.

It was the variation between fertilizer formulae (amongst other things) which caused me to begin a series of studies into what precisely our orchids need for the production of optimum growth and flower production.

I noted that many essential elements were obviously absent from some formulae. One such element missing was Calcium (Ca).

In some of the most popular products, and no doubt some of the most advertised, Ca is missing altogether. If, therefore, growers are applying Ca deficient fertilizers to their orchids, some deficiencies can occur in the plant, and this should be corrected.

The uses of calcium by plants (and therefore orchids) are many and they are complex. Calcium is derived from many sources, and probably in more than one form, depending upon its habitat.

If we consider the natural growing environment of orchids one would expect birds, animals, insects and terrestrial plants to be involved in supplying that Ca. Birds, after feeding on insects etc excrete calcium (Calcium Phosphate?) in fairly high volumes, and any excretions deposited on an orchid plant colony would be readily available to the plant.

Even dead insects, which would be harboured by the orchid colony would decompose and supply Ca, as would perhaps parts of the host plant, or adjacent decaying vegetable matter.

If it is doubted that birds can supply Ca to the ecosystem, then take up bird observing and note what a Kookaburra deposits around the entrance to its nest, or beneath where it perches!

Trees with their roots in the ground would extract Ca from the soil and thus transmit it to the leaves and cells of the total plant. As branches broke off and leaves dropped that Ca would be released as the material decomposed. If those leaves and twigs dropped in the vicinity of the orchid's root system, eventually a proportion would be made available to the orchid.

If an orchid drops its own leaves and they too decomposed within reach of the plant's root system, the Ca and all the other elements contained in those leaves would be resupplied to the orchid's system in time.

Terrestrial orchids would no doubt derive their Ca supply from the soil, as well as from decomposing vegetation, and that ever helpful bird population, flying or perching overhead.

In our greenhouses, however, the supply of calcium to our orchids is controlled by what is in the compost, the water supply, and in the nutrients we feed them. All three supply the aggregrate volume of Ca. If one or more of those sources is devoid of Ca then we have to make good the deficiency by supplying it in another form.

The usual forms of Ca available for horticulture are Gypsum (Calcium Sulphate), Hydrated Lime (Calcium Hydroxide), Dolomite Lime, and Chalk Lime (Calcium Carbonate). Another form is Calcium Oxide, or Quick Lime or Caustic Lime as it is known. Most forms of Ca are not soluble, except in an acid solution and by dissolving those forms of Ca the acid used can compound the problems experienced by further unbalancing

the formulae. For example Sulphuric Acid adds sulphur, Muriatic Acid (hydrochloric acid) adds chlorine.

Ca is normally soluble if an extra Hydrogen (H) atom is bonded to a compond containing Ca, but it is not all that simple. The best example of what occurs is the method by which stalactites and stalagmites are formed in caves. Carbon Dioxide (CO_2) in the soil, by a chemical reaction converts limestone (Calcium Carbonate, or Ca CO_3) to soluble Calcium Hydrogen Carbonate ($Ca(HCO_3)_2$). On exposure to air in the cave, the CO_2 is lost, the H atom is released, and once more limestone is formed and deposited as a stalactite or stalagmite. Calcium Hydrogen Carbonate is an unstable compound and while it would solve a problem it cannot be produced in a form that is saleable.

Calcium Carbonate needs to be dissolved in an acid solution so is therefore undesirable. The choice of which form of calcium we can supply plants can be narrowed down to two compounds, Calcium Hydroxide ($Ca OH_2$), or Gypsum ($Ca SO_4$). Gypsum has a Sulphate radical as part of its formula so that too is undesirable because of the volume of sulphur we would be adding. That then leaves Calcium Hydroxide as the most suitable source of Ca because it has an hydroxide radical as part of its structure and that being comprised of oxygen and hydrogen only, is also an advantage because we are not adding any harmful element. Dolomite lime I will discuss later.

One gram of $Ca OH_2$ contains the following proportions of elements:

Ca: 540.80 mg. O: 431.80 mg. H: 27.30 mg.

therefore if one gram was added to water to make one litre the "ppm" (parts per million) ratio would be:

Ca: 540.80 ppm. O: 431.80 ppm. H: 27.30 ppm.

As stated earlier, the **total** supply of Ca has to be considered when assessing just how much is to be provided to orchids. If our water supply contains, say, 10 ppm Calcium Carbonate (not uncommon for many Australian water supply systems) and the potting mix also supplied, say, a further 10 ppm that would be a reasonable quantity of Ca to be supplied to a small growing orchid plant, but not to a larger, more vigorous growing plant such as a standard cymbidium.

One must remember that no potting mix can continue to supply Ca (or any other element for that matter) for ever. Sooner or later watering will leach out all, or most of the free elements contained in the mix ingredients.

In most text books, and in a number of experimental nutrition programmes the accepted level of Ca supplied is between 50 ppm and 200 ppm. This would of course vary from one orchid genus to another.

A number of orchids have adapted to growing in limestone areas, such as some paphs, and those terrestrials endemic to the Chalk Downs regions of England. The fact that they are endemic to these regions does not necessarily mean that they require lime in greater volume, it is simply that they have adapted to the excess Ca that they have available.

Some paph growers add shell grit to their mix in the belief that this supplies Ca, whereas most likely it only opens the mix. The crafty little shell fish which created the shell in the first place made it so it would not dissolve and for that shell to release its calcium would require an acid pH condition that would kill the orchid very quickly.

Another compost additive is Dolomite lime which contains Ca and Mg, but if too much is added it can effectively raise the pH to above neutral and cause damage[2].

This "oversupply" syndrome is not uncommon with additives to mixes, or slow release fertilizers because one never knows the exact proportions one adds making it easy to over, or, under supply one or more elements, or the total product.

Dolomite lime is a compound of Calcium Oxide and Magnesium Oxide (approx 20% CaO and 14% MgO). This material is usually added to the mix and is taken up by the plant.

The only problems in adding it to the mix are that too much is supplied all at once, and that it will mostly be leached away by watering before the plant has a chance to absorb it anyway, and it is the floor that would benefit more from that not the orchid. Plus, one never knows when the material is all used up and supplemental feeding must begin. It is also not readily soluble. One is not, of course, told what the other 66% of that substance is, so an imbalance could occur in one's fertilizer programme!

The safest way of supplying Ca is by Calcium Hydroxide, which I have submitted to exhaustive testing with no obvious long term side effects appearing. A little added to each application of water is best. If one has an injection system by which it can be automatically added to the water being applied use that, or if such a system is not available then the Ca can be supplied with the liquid nutrient feedings. I use an "AMIAD" brand system which is for rather large volume work but smaller ones are about, e.g. the Young (USA) range. (If there is an Australian brand I would like to know of it!)

My testing has shown that a suitable supplemental Ca feeding, for my water/fertilizer supply (and I emphasize **my**), is 50 ppm of Ca per week. My water supply provides 10 ppm with each watering (more or less depending upon the season) which would add another 70 ppm, making 120 ppm in all. I would suggest that

some growers may need to increase the Ca if, when they make up their diluted liquid fertilizer, the pH is in the region of pH 5.5 or lower. If, on the other hand it is pH 7.0 or above, then add acetic acid.

Unlike other acids, which can add further sulphur or chlorine, acetic acid (ethanoic acid) is derived from ethanol, and contains only Carbon, Hydrogen and Oxygen (i.e. CH_3COOH). It can be bought full strength (glacial) or in diluted form, at photographic shops. Vinegar is a dilute form of acetic acid.

For some reason or other, I find that in the winter months, the pH of my liquid fertilizer is pH 5.3, whereas in the drier months it is pH 6.0. In such circumstances I would raise or lower the Ca supplied to coincide with the pH level. My potting mix (Cymbid) is now usually indicating pH 6.3.

Those growers who wish to add Ca to their fertilizer, can for a start, add one gram of Calcium Hydroxide to 10 litres of water and apply that at every watering. Alternately apply the total amount of Ca when feeding. In areas where the pH of the water supply is low then increase that by 50 per cent. Increase, or decrease those volumes until a satisfactory level is noted.

pH can be checked by buying the pH "sticks", and I would suggest the multicoloured sticks in favour of normal litmus paper as they do provide a crosscheck. A small pack will last a fair while.

Few growers, if any, really know the functions of Ca in orchid growth, and for that matter few scientists yet know all of the functions that Ca controls. Those functions which are known should be understood by all orchid growers.

Functions of calcium in growth. In soils which are high in Ca the condition of that soil will be:

a. High in pH and Carbonate,
b. Rich in nutrient elements,
c. Nitrogen fixing and nitrifying bacterial activity will be high.
d. Heavy metal ion solubility will be low.

On the other hand if soil is acid the condition of the soil will be:

a. Low in Calcium,
b. Low in pH,
c. Low in carbonate,
d. Poor in nutrients,
e. Heavy metal ions will be highly soluble, and
f. Activity of nitrogen fixing and nitrifying bacteria will be greatly reduced.

The above is a fairly general statement because of the variables that might apply from sample to sample, however, the most important implication for us is the low pH, etc that can occur if calcium is deficient and what that deficiency can cause.

The solubility of the heavy metal ions, e.g. Copper (Cu), Zinc (Zn), Lead (Pb), etc is greatly enhanced in acid conditions, and of course if oversupplied these can be harmful.

In regions where acid rain occurs all the heavy metal elements are being leached from the soil in increased quantities and killing vegetation simply because of the lower pH of the soil (circa pH 4.8). In some regions of Europe Ca is being added to lakes to prevent fish dying!

Ca then controls the acidity levels, and the release rate of heavy metal trace elements which are still essential to plants but only in minute quantities.

The actual concentration of Calcium in plant tissue will vary from genera to genera and from specimen to specimen in each genus. It is impossible to say which requires what, and if one has a greenhouse full of various species that makes it impossible to provide anything but an average to the lot. The trick is to find the average!

In plant tissue Ca is immobile, that is the plant cannot move it to be used elsewhere in its system as is the case with other elements.

A summary of the known effects of Ca are:–

1. The promotion of new root growth in germinating seed,
2. The prevention of nutrient elements becoming toxic,
3. Control of pH levels,
4. Ca is required for the germination of pollen and the growth of pollen tubes in many plant families,
5. Ca is required in the synthesis of cell wall materials, and the maintenance of membranes in a functional state,
6. One enzyme, amylase, is dependent upon Ca for its creation,
7. The solubility of toxic, heavy metals is controlled by Ca.

(**Note:** Item 4 is interesting and it just might hold the key to one of the reasons why some orchids produce "false pregnancies".)

In spite of all research institutes recommending levels of the various major and micro elements as desirable, manufacturers seem to ignore that data and the public is unaware, through lack of expertise, what is deficient, or inadequate.

One must presume that most fertilizers are prepared not for pot culture but for plants grown in soil where Ca is added separately. To overcome a Ca deficiency growers should add it to their feeding programme. My presumption is that most fertilizers are prepared for the vegetable garden and sold for orchid nutrition as an afterthought. If so then we must determine which ones are suitable for orchids.

Some growers are resorting to the addition of

marble chips in their potting mix. Whether or not they realise it, marble is crystalline lime (Ca) and in a slightly acid solution this would be slowly dissolved and released. However, I still feel a more efficient method of supplying lime is to add it to the water supply.

Trace elements. When investigating the contents of commercial fertilizers, the absence of, or reduced volume of trace elements also began to show up. I would regard this as somewhat less of a problem than Ca deficiency, because some additional trace elements can be supplied via the potting mix and/or water supply, although I do believe the correct amount of trace elements should be used.

There is little evidence of the provision of the element Iodine (I).

In recent discussions on Maxicrop which I have stimulated, mention has been made of the need for Iodine to be fed to plants. As far as I can see little is known of the effects of Iodine on plants — it is somewhat of a mystery element in that respect. The first reference to it I found was Withner[3] and I have been experimenting with it now for four years.

Iodine is suspected of contributing to chlorophyll production, and my testing seems to confirm this. If over supplied it is toxic, and yet when applied at the rate of 0.1 ppm, once weekly, pale green leaves turn a solid green colour. The source of Iodine that I have used is Potassium Iodide, but I is also an ingredient in Maxicrop, which is derived from seaweed.

Potassium Iodide is not cheap to buy because of the minimum quantity packed, and the weighing of the minute quantitites is a problem, so the next best source is Maxicrop, but that substance also includes certain cytokinins (a group of growth hormones) and if fed to plants incorrectly serious damage and deformities will result (AOR December 1982).

I would suggest that Maxicrop and Lanes Formula 20 should be never used together on the same plant at the same time, because the latter contains auxins (growth hormone) and the effect of a cytokinin is increased in the presence of an auxin.

The final deficiencies to be discussed are Iron (Fe) and Magnesium (Mg). Both elements are extremely important to the wellbeing of plants. Magnesium for the production of chlorophyll and Fe for various reasons, including the manufacture of ferrodoxins (iron-based proteins). Both elements are usually supplied in fertilizers well below the levels that orchids require and need to be increased in virtually every fertilizer on the market.

It must be noted that too much Ca will inhibit the plant's ability to take up Mg, so a balance between the two has to be provided.

After considerable testing I now hold the view that if a plant's nutrition is perfectly balanced optimum growth will occur. As part of that "balance" the factor of light must be considered, because of its relationship to growth.

A test or two I have been performing tends to suggest that if light intensity is twice that required, twice the amount of nutrient is required to gain the same rate of growth as would be gained if the light intensity is reduced to its optimum level. A reduction in light may therefore be equal to an increase in nutrients.

For those who can make up their own chemicals, the following trace element formula is offered. It can be added to any of the current "off the shelf" products by adding 5 mls to each litre of liquid fertilizer made up. A warning — the price of some of the ingredients will be somewhat expensive for a start — in the order of $1 per gram! If clubs were prepared to buy the ingredients in bulk and share them out, of course, the initial cost would be lower per person.

Formula for Trace Element Additive

Boric Acid (H_3BO_3)	0.143	gram
Potassium Iodide (KI)	0.2	gram
Molybdenum Trioxide (MoO_3)	0.10	gram
(or Molybdic Acid which is cheaper)	0.11	gram
Copper Sulphate ($CuSO_4.5H_2O$)	0.25	gram
Zinc Sulphate ($ZnSO_4.7H_2O$)	0.14	gram
Manganous Sulphate ($MnSO_4.H_2O$)	0.75	gram
Water to make up to 1 litre.		

If the fertilizer used contains no chlorine, add:–
Potassium Chloride (K Cl) ..... 2.0 grams.

To make a stronger stock solution the above can be made up to five times stronger, and diluted more when used. Use water that is about 60 to 80 degrees C for adding chemicals, and add one at a time and stir until each is dissolved.

One can of course overdo the application of trace elements, so it is always wiser to commence at weak dilutions and gradually increase the supply until the desired effect is achieved. Once it is, it is not a bad idea to just decrease the rate of supply slightly, and raise it again if need be.

The above should be a starting point for the correction of fertilizer deficiencies, but as each and every area and climate is different growers must experiment a little to find the level that will suit their climate, their potting mix and their environmental conditions.

Lot 18 Dandenong-Hastings Rd,
Cranbourne Rural 3977

REFERENCES:

1. Nitrogen, Potassium and Magnesium Nutrition of Three Orchid Genera. Hugh A. Poole and John G. Seeley. AOR March 1984.
2. AOR 1965 page 181.
3. Withner, Carl. The Orchids — Scientific Studies. Wiley.

It's only just a ground orchid

RAY ROBINSON in the *Townsville OS Bulletin.*

Most orchid growers have fond memories of how they became interested in growing orchids and no doubt remember with affection their very first orchid.

As with many North Queensland orchid growers my first orchid was a *Dendrobium canaliculatum.* My next acquisition was a gift of a 'Ground Orchid' — *Spathoglottis plicata.* Both of these orchids have, and always will have, a special place in my memories of that stage of my life. They still enjoy a favoured place in my present collection.

Unfortunately, in these days of flamboyant mericlones and large and colourful cattleyas many of our advanced orchid growers relegated their *Dendrobium canaliculatum* to a branch of the old lemon tree in the backyard and, if its lucky the *Spathoglottis plicata,* being "only just a ground orchid" has made it to the overgrown bed along the back fence or ended up in a jam tin of dirt, just outside the old shed.

There was a time, however, when *Spathoglottis plicata* enjoyed pride of place in the great orchid collections of Townsville and North Queensland. This occurred in the late 1940s when a young Townsville Orchid Society, in pre-plant quarantine days began importing orchids from foreign countries for distribution to its members. It was here that *Spathoglottis plicata* and some of its varieties and hybrids were introduced to Australia. Some of these varieties were *Spathoglottis plicata var. viellardii;* var. *alba;* Penang white; var. *pallidissima,* and *Spathoglottis* Java Beauty; *S.* Primrose and *S.* Primson.

Unfortunately a lot of these spathoglottis have been allowed to "die out" due no doubt to neglect and lack of interest. All that are left are in some old collections and those that made it to the jam tin or back fence.

This is a great pity as it is certainly a real delight to visit one of our veteran orchid growers and witness a Java Beauty or Primrose in full bloom.

Spathoglottis is a genus within the sub-tribe Phaiinae consisting of over 40 species. These are distributed from China through India, Malaya, Borneo, Philippines, the Pacific Islands to New Guinea and Australia. *Spathoglottis* reaches the peak of its development in Papua New Guinea where probably a good number of undescribed and unnamed species exist.

All spathoglottis are terrestrial in habit. The *S. plicata* type are non-deciduous and lowland growers. Their colours range from mauve and lavender to pink and white (and sometimes yellow). Other species are highland growers, they are yellow in colour and are in the main deciduous, losing their leaves in the dry or cool months. These deciduous species are semi-sub terrestrial having their pseudo bulbs just below the surface of the soil, while the non-deciduous types are super-terrestrial, in that their pseudo bulbs are on, or above the soil, with only the roots actually entering the soil.

Spathoglottis appreciate good drainage and a well-aerated soil, they require a good amount of light, being able to stand full sun light. However, I feel they do their best in North Queensland with about 50 per cent shade. The non-deciduous types seem to be constant growers where the deciduous types require a rest during the dryer or cooler months.

There are two species of spathoglottis occurring naturally in Australia, one being *Spathoglottis paulineae* which occurs from Cardwell through to Cape York. This species has the annoying habit of self pollinating soon after the flowers open. This habit certainly detracts from its desirability as a horticultural specimen. The other Australian species has only been discovered in recent years by Dr Bill Lavarack on his expeditions to Cape York Peninsula. This spathoglottis is quite robust and is a desirable species. It has been found to be a variety of *Spathoglottis plicata.*

Spathoglottis species are freely intrafertile but, unfortunately most hybrids are very nearly always sterile when either selfed or crossed with another hybrid or species. This of course has resulted in difficulty in raising second generation hybrids. Many of these second generation crossings have proved to be seedless or produce only one or two seeds per capsule.

Nevertheless a good deal of hybridising was carried out in Malaya and Singapore in the 1930s and 1940s with particularly attractive and desirable hybrids having resulted by crossing the lavender species with the yellow species.

In recent years hybridising within the genus *Spathoglottis* has been at a minimum with the last hybrid being registered with the RHS in 1961.

The late Mrs Eunice Kirkwood of Cairns who became well known for her hybridising of 'Reed Stem' epidendrums and ceratobium dendrobiums had commenced a hybridising programme of spathoglottis. Unfortunately this programme came to an abrupt end with her untimely death in the mid 1970s. Unfortunately these hybrids never came on the market but Mr and Mrs Tom

Hobden of Ingham were lucky enough to purchase several of these hybrids. Over the last few years these hybrids in the Hobden collection have been flowering and have proved to be outstandingly attractive and would rival many of our modern day cattleyas and vandas for their beauty.

The actual parents of these crosses are not known and will probably never be known. However it is strongly suspected that *Spathoglottis plicata* and *Spathoglottis affinis* or *Spathoglottis pubescens* figure largely in their breeding.

The flowering of these Hobden/Kirkwood hybrids has stimulated a fresh and vigorous interest in spathoglottis and as a result several North Queensland individuals have commenced a breeding programme using several species of spathoglottis.

It is envisaged that the next few years will see some fine Spathoglottis hybrids and it is hoped that the genus *Spathoglottis* will again resume an honoured place in the orchid world and cease to be referred to as "it's only just a ground orchid".

23 Canara St, Townsville, Q, 4814

THEY DON'T IMPROVE WITH AGE

Insecticides and fungicides are complex compounds that may lose their effectiveness over time, even if kept in their original containers. Few can be stored indefinitely, and there isn't one which improves with age, but you **can** increase their shelf-life by storing them properly.

Consider benomyl, a fungicide also known as Benlate. Properly stored, Benlate remains effective for two full years, but as soon as you mix it with water, it starts to decompose. A water solution of Benlate is effective only if used within eight hours of mixing. If left for 24 hours, Benlate will harm the plants it is supposed to cure.

The behaviour of Benlate is typical of other compounds too. Old, stale chemicals are more likely to harm plants than to heal them. But most chemicals stay at full strength for up to two years if they are stored in tightly-sealed containers in a dry place and kept at room temperature.

When they ripen beyond the age of effectiveness, left-over pesticide mixtures should be put aside. Store them in a safe place until they can be disposed of properly. DON'T pour them down the sink. As long as they remain potent, try to mix only as much as you think you'll need for each dosage. Follow the label's directions carefully, and put a date on each container of mixture when you have made it up.

The following are some common pesticides and their estimated shelf lives:

BENLATE — two years; DIAZINON — indefinite; DI-SYSTON — two years; MALATHION — indefinite; META-SYSTOX — two years; CAPTAN — three years. *Devonport OS Newsletter*

Television advertising for orchid shows

COLIN HAMILTON

Orchid societies in provincial cities might be able to follow the lead of the Rockhampton Orchid Society in using paid commercial television advertising for promotion of orchid shows. In the few years this form of media coverage has been used, the Rockhampton Orchid Society has shown a four-fold increase in its financial turnover. This is all the more remarkable when one considers that the society does not charge admission to its shows.

Most committees would probably recoil in horror when told the cost of a 30 second television commercial. However if approached in the right way, television station managements usually provide what they term "community announcements" or "bonus spots" for local community groups. And all that is necessary for the commercial is a couple of good quality colour slides of orchids or displays of orchids. The station will supplement this with a slide containing details of where and when the show is on to complete the announcement. A short description of the show has to be worked up for the voice-over recording. When done the first time this can be just updated for following shows.

I have to acknowledge the tremendous community spirit of our local commercial station, Rockhampton Television Limited, and the support they have given the Rockhampton Orchid Society over the years. I feel sure that other stations around the nation are probably just as receptive, and other societies should investigate this.

We purchase our advertising for the day the show opens (on a Friday) only. Of course colour television was made for "selling" orchid shows. In addition to what the station provided as pure advertising, we also find the news department usually very anxious to film something for that evening's local news too. As you can see, what you buy can go a long way.

The cost of television time may be out of the question for societies in capital cities, but it might still be worth investigating.

I believe that the Rockhampton Orchid Society may be the only society using commercial television advertising regularly. There is certainly no reason why other societies should not join us.

103 Menzies St, North Rockhampton, Q, 4701

"Clearly, facts are not knowledge. We do not have knowledge until we have organisation." — *Robert Hutchins.*

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Bark and its treatment

ERN PAULEY

Acknowledgement to Parramatta OS Orchid News

To the average grower of orchids the search for a mixture that will provide the best of growing conditions is something that most of us strive to find.

With cymbidium growers their mixture are many and varied, so much so that it would take quite a few pages to give all the different and complex formulas. The cattleya grower seems to have a lesser problem, as the main ingredient is bark.

Some cattleya growers maintain that there is only one bark to use and that is American Fir Bark, an importation to this country as we do not have stands of this timber. We do have a very good substitute in our *Pinus radiata* and it is much readily available and much less expensive.

One grower, expounding the virtues of the imported bark maintained that you could see the difference in growth after a month but I think he must have had the optimum of growing conditions, or maybe the plants were good growers and would do well in most mixtures.

We buy good quality local bark, that has been weathered before putting through a hammer mill, graded and bagged. The nursery where we buy our bark uses clear plastic bags so you can see the deep red colour of the bark taken from the trunks of the trees. Bark that is stripped from immature trees is much lighter in colour and you will find quite a lot of the cadmium layer through it.

Bark that is to be used for cattleyas is put through a half-inch sieve so as to remove all the very small bark and any dust. If bark is used straight from the bag any dust will gradually find its way to the bottom of the pot and will form a muddy layer. This will form either in terra-cotta or plastic pots and when allowed to dry no amount of water will flush it out. This fine bark is kept and used when potting natives, that don't seem to mind untreated bark.

We don't have meters or test kits to check the acidity, so to make sure that it is kept within bounds all bark used either for cymbidiums or cattleyas is treated.

Using a clean plastic garbage can or like container half fill it with bark and in every bucket of water used to soak the bark add one heaped teaspoon of Chelated Iron. You will find you require four or five buckets of this mixture to cover the bark. With a piece of wood, thoroughly mix the bark and liquid, so that all bark is pushed into the mixture.

Let the bark soak for at least 24 hours or longer. After treatment tip the contents out onto an old square of shade-cloth and spread out to dry. The chelated iron will not harm your lawn or grassed area. Don't tip the bark out near your concrete paths as I'm sure the iron would stain them.

Keep up this treatment until the required amount of bark has been processed and then store in a clean dry plastic bag.

Over the years we have tried many different mixes, scoria, charcoal, chopped-up tree fern, styrofoam in all different proportions. Some have given good results, others leave a question mark. The first two seem to retain the salts from the soluble fertilisers we use and have to be watered heavily to flush it out. Tree fern is very hard to obtain. Bark and styrene proved quite good and the plants did quite well, but when repotting, the old mix had to be dumped. Styrene is banned from the potting shed as it blows everywhere, even out into the yard.

Cattleyas will grow quite well in straight bark, but when using plastic pots it's a hard job to keep the plant firm and nearly every mature bulb has to be staked.

The mix for our cattleyas is 60 per cent treated bark and 40 per cent half-inch blue metal, and of all the different combinations this is by far the best. The added blue metal gives weight to the pot, and plants when firmed down and staked do not move, this is essential to good growth as new roots are very brittle and the slightest movement will break off the new tips.

As regards the blue metal, don't take any from road verges as these may be sprayed with weed-killer, and although metal is non-porous some may dry on the outside and you will be in all sorts of trouble, maybe not so much from the DMR but you could lose plants. We buy our metal from a supplier who buys direct from the quarry.

Regular applications of fertiliser is a must, so follow your usual pattern. We find alternate waterings of organic and inorganic gives very good results.

Theophrastus (370-285 BC) of Greece was one of the first to classify living things. He grouped plants according to their form and structure, as trees, shrubs, under-shrubs, and herbs. He also used the growth pattern of plants — annual, biennial, perennial — in his scheme. He described and classified 480 different plants.

Carolus Linnaeus (1707-78) is regarded as the father of taxonomy because his work provided the basis for the present day classification of all plants, animals and minerals.

Colour in Cymbidiums — Red

IAN WHITCOMBE

PART I

During my search for an understanding of the influence each species has had on the quality and colours of our present-day cymbidium hybrids, I developed a very special interest in the reds. A whole range of questions unfolded — first, why red at all, when the most likely species, *C. insigne*, only offers varieties in the range of white, blush and pink; then followed how did it happen at all, let alone in the primary crosses — and finally but not least, can we expect to bring reds to the same high standard reached by the other colours?

I first looked at the primary crosses made by the pioneer hybridists to see if I could learn anything at that point. Table 1 lists a number of the primary crosses along with the colours recorded by various sources. Unfortunately the readily-available information is very incomplete, and to some extent may affect the conclusions that can be drawn from any study of the early hybrids.

TABLE 1. PRIMARY HYBRIDS
SPECIES % IN HYBRID

Hybrid	Parents	Recorded Colours	*eburneum*	*parishii*	*lowianum*	*grandiflorum*	*insigne*	*i'ansonii*	*schroederi*	*tracyanum*	*erythrostylum*
Ceres	*insigne* / *i'ansonii*	rose, red, bronze					50	50			
Pauwelsii	*insigne* / *lowianum*	white, yellow, green, pink, rose			50		50				
Cooperi	*insigne* / *schroederi*	pink					50		50		
Albanense	*insigne* / *erythrostylum*	white, blush					50				50
Doris	*insigne* / *tracyanum*	yellowish-red overlay					50			50	
Holfordianum	*eburneum* / *grandiflorum*	white	50			50					
Lowio-grandiflorum	*lowianum* / *grandiflorum*	green, yellow-green			50	50					
Conningsbyanum	*insigne* / *grandiflorum*	green, yellow-green				50	50				
Gottianum	*insigne* / *eburneum*	white	50				50				
Dryad	*insigne* / *parishii*	white		50			50				
Garnet	*lowianum* / *parishii*	white, yellow-green		50	50						
Eburneo-lowianum	*eburneum* / *lowianum*	white	50		50						
Wiganianum	*eburneum* / *tracyanum*	off-white	50							50	
Rosefieldiense	*grandiflorum* / *tracyanum*	green				50				50	

Table 1. Primary Hybrids

Only four of the original or primary building blocks were found to have produced colours in the range — blush pink, rose, red and bronze.

This observation led to my first assumption, that the species involved in these four hybrids must have either a positive or neutral effect on the formation of red in cymbidiums.

The next point to attract my attention was that *C. insigne* is the common parent of each of these

four hybrids, hence my second assumption was that *insigne* must be the one essential component in the formation of red in cymbidiums.

Now to look at each of the primary hybrids from *C. insigne*:—

Ceres (*insigne* x *i'ansonii*). See September 1983 AOR for information about the species cymbidiums. In spite of the fact that *i'ansonii* is yellow, in conjunction with *insigne* produced rose, red and bronze.

Pauwelsii (*insigne* x *lowianum*) ran through the whole range of colour from white to rose. Here again the second agent in the cross, *lowianum*, which is yellow-green produced colours through to rose.

Cooperii (*insigne* x *schroederi*). The records are very skimpy but at least one clone *C.* Cooperi 'Plush' is pastel pink.

Albanense (*insigne* x *erythrostylum*). Here again the records are very thin, white blushed with pink is the only record I have found.

Doris (*insigne* x *tracyanum*) produced yellow with red overlay.

The other three primary hybrids using *insigne*:—

Conningsbyanum (*insigne* x *grandiflorum*) Gottianum (*insigne* x *eburneum*) and Dryad (*insigne* x *parishii*) have not been recorded as having produced pink or red clones.

Of the primary crosses in Table 1 only two brought about an intensification of the pink of *insigne* to produce rose and red, i.e. Pauwelsii and Ceres.

The most pressing question to be answered is why do *lowianum* (yellow-green) and *i'ansonii* (yellow) bring about the development of red when combined with *insigne*. Perhaps at this point we should look at a group of secondary hybrids that have been recorded as producing pink, red and brown.

TABLE 2. SECOND AND THIRD-GENERATION HYBRIDS

Hybrid	Parents	Recorded Colours	SPECIES % IN HYBRID: eburneum	parishii	lowianum	grandiflorum	insigne	i'ansonii	schroederi	tracyanum	erythrostylum
Magali Sander	*Cooperi* / *i'ansonii*	chocolate					25	50	25		
Ralph Sander	*Cooperi* / *Pauwelsii*	bronze			25		50		25		
Joy Sander	*Ceres* / *Pauwelsii*	orange, pink, red, bronze			25		50	25			
Cremona	*Cooperi* / *Elfin*	rose, bronze		25	12½		37½		25		
Joyful	*Ceres* / *Joy Sander*	red			12½		50	37½			
Priam	*Ceres* / *President Wilson*	red	6¼		31¼		37½	25			
Carisbrook	*Ceres* / *Ralph Sander*	red, brown			12½		50	25	12½		
Louis Sander	*Ceres* / *Alexanderi*	white, green, rose	12½		12½		50	25			
Alexanderi	*insigne* / *Eburneo-lowianum*	white, yellow, pink, rose	25		25		50				
Vesta	*insigne* / *Alexanderi*	white, pink, rose	12½		12½		75				
Merlin	*Alexanderi* / *Dryad*	white, rose	12½	25	12½		50				

Table 2. Secondary Hybrids

This is a group of eleven building blocks that appear prominently in the background of our present-day pink, rose, red and brown cymbidiums. This group confirms the observations made from Table 1 as well as adding more information about the part played by the individual species that make up our present-day hybrids.

To summarise my observations regarding the part played by the various species in relation to the production of red in cymbidiums:—

C. insigne. This is the only species present in

every one of the early hybrids that produced pink, rose, red and brown. It must surely be the top contender as the primary source of our red cymbidiums. I regard it as strongly-red positive.

C. lowianum. It is present in all but one of the secondary hybrids and is obviously a very important factor in the production of red. In this list of secondaries there are again three hybrids, Alexanderi, Vester and Merlin which followed the example of Pauwelsii and produced pink to rose without any infusion of *i'ansonii.* One of the possible explanations that come to mind is that it carries a positive-red factor similar to the negative, or recessive red-pure factor of which we are now well aware. I regard *lowianum* as strongly-red positive.

C. schroederi. In spite of its poor showing of colour in the primary cross, Cooperi, now stands out in this group of secondaries as the prime source of brown — all four hybrids, when it appears, produced brown. Two of the secondary hybrids, Ralph Sander and Cremona carry *lowianum* but not *i'ansonii,* demonstrating once again the ability of *lowianum* to promote the production of brown from *schroederi* as well as red from *insigne.* I regard schroederi as red-brown positive.

C. i'ansonii. Follows through from Table 1 as a strong influence in the production of red. However, I have been intrigued by the semi-alba *lowianum*-type lip marking. It would certainly help to explain some of the pieces of this colour puzzle if *i'ansonii* could be proved to be a natural primary hybrid from a pure-colour form of *lowianum.* At least for the moment I must regard it as strongly-red positive.

C. grandiflorum. **Notable** for its total absence from any of the early hybrids that produced pink or red. I regard it as strongly-red negative.

C. eburneum and *C. parishii.* Their primary hybrids did not produce pink, indicating a negative value, in relation to *insigne,* but when *lowianum* and or *i'ansonii* were introduced in the secondaries, some intensification of colour came through. I regard them as red neutral.

C. erythrostylum. In the primary hybrid Albanense, some pink came through, hence I regard it as red neutral.

C. tracyanum. This species is a special case as it appears to be red negative in relation to *insigne,* yet projects its red overlay into its hybrids.

I have no real answers at the moment to this mystery. While it is possible to see what species are contributing to the production of red it will have to be left to the biochemists to give us the final answer. This answer may well be near at hand as a result of recent work by Dr Robert J. Griesbach — American Orchid Society Bulletin, October 1983. *Orchid flower colour — Genetic and Cultural Interactions.* However in this article I have tried to share some fresh thinking on the question of where the red and brown cymbidiums came from. I find myself to some extent in opposition to the generally-accepted theories on this subject, however it is my earnest hope that this article will spark off a renewal of thoughtful discussion. Later in Part 2 I will try to define the limits of our present-day multi-generation red cymbidium hybrids, and yes, I do believe that we can bring red cymbidiums to match the standard of the other colours.

REFERENCE:

Orchid flower colour — Genetic and cultural interactions. Dr Robert J. Griesback. American OS Bulletin, Oct 1983, pp 1056-61.

Editor's Note. Readers are referred to *Orchid Biology — Reviews and Perspectives,* edited by Prof Arditti, Cornell University Press, for further study of colour in orchids. The chapter *Anthocyanins of the Orchidaceae,* page 117, is based on research by Prof Arditti and Dr M. Fisch. The book is in most society libraries.

Mr Whitcombe has some particularly interesting data on colour for the second part of this article.

NEW CLUB AT ALBURY-WODONGA

This club was formed in November 1983 and now has 36 members. Meetings are held at the Wodonga Bowling Club at 8 pm on the first Tuesday of each month. All visitors are welcome. Growers who can lecture are particularly welcome and are asked to first contact the secretary so that arrangements can be made. The secretary is Mr Geoff Milton of 665 Jones Street, Albury, NSW 2640.

The club hopes to stage a show in Spring.

CANBERRA SOCIETY FORMED

After preliminary meetings starting as far back as last November the Canberra and District Orchid Society was formed officially at a meeting in May. For further details please contact Mr Brian Davies, 28 Ashburton Circuit, Kaleen, ACT 2617. Visitors and lecturers will be most cordially received.

The late Mr Len Archer

Mr Archer was well known for his promotion of native orchids. While living at Coffs Harbour his work took him frequently into areas where orchids abound. He took these opportunities to look for rare and unusual native orchids and supply specimens to the Sydney Herbarium. This resulted in extensions to the habitat area of many orchids. He was a licensed collector.

In the 1950's extensive felling of timber in the Dorrigo and Grafton areas affected the habitats of orchids and many outstanding plants were saved from destruction by him. He was a knowledgeable and careful grower of these plants.

After moving to the Central Coast a few years ago Mr Archer donated his collection of native orchids to the Sydney Botanical Gardens. His herbarium of pressed specimens was donated to the CSIRO office at Coffs Harbour and the University of Armidale.

Australia's Colourful Sun-orchids: *Thelymitra*

R.J. BATES

Thelymitra is a large genus of some fifty species ranging from New Zealand (10 species) through Australia (40 species) to Indonesia and the Philippines (one species).

The name *Thelymitra* comes from the Greek: "thelys" — feminine and "mitra" — a head-dress and refers to the main taxonomic feature of the genus, the much-ornamented and decorated column (figure 1).

Sun-orchids are terrestrial plants ranging in height from ten centimetres to over a metre. Most species spend the summer in a dormant state as a fleshy tuberoid (figure 2) which sprouts with the first autumn rains, growing quickly during the cool damp winters of temperate Australia and flowering during warm sunny days in spring. (The vernacular name "sun-orchid" comes from the habit the Thelymitras have of opening their flowers only during warm, usually sunny days. The flowers of some species remain tightly closed in all but the hottest, most humid weather). Only one leaf is produced; this is usually long, narrow and channelled and is usually glabrous, although ovate or cordote leaves do occur and one species has a hairy leaf.

The Thelymitras are quite a paradox among the Orchidaceae; instead of the usual zygomorphic orchid flowers the perianth of most sun-orchids is quite regular (see photographs), the labellum being an undifferentiated petal, making the flowers quite lily-like. For this reason *Thelymitra* was at one stage thought to be a primitive orchid genus; it now seems more likely that sun-orchids have evolved from orchids with more typical zygomorphic flowers, as *T. venosa* (photo 1), a species with many primitive traits does have a differentiated lip.

The other most noticeable characteristic of the genus is the fantastic range of colours found in the flowers (see photos). The colour most commonly found in sun-orchids is blue and the range of shades and brilliance of some of these blues has to be seen to be believed (i.e. *T. canaliculata, T. crinita*). Other species have flaming pink flowers (*T. rubra*) or orange-red (*T. x macmillanii*). There are lemon-yellow flowers (*T. antennifera*); purples and mauves (*T. nuda*); clear whites (*T. pauciflora, T. retecta*), spotted flowers (*T. ixioides*) or striped (*T. venosa*), blotched green and brown (*T. fuscolutea*) or a range of metallic tints (*T. epipactoides*). The prize for colour however must go to the iridescent *T. variegata* which is purple and mauve with deeper-coloured spots, the whole set off with streaks of orange and no two flowers are ever exactly alike.

Pollination. The characters which set *Thelymitra* apart from other orchids (i.e. the regular flowers with irregular expansion and the highly-decorated columns) are a probable result of their pollination syndrome. The sun-orchids are pollinated by fast-flying, solitary native bees. The bees are active only during warm weather and for this reason the sun-orchids find it more efficient to remain closed when the bees are inactive. This probably prevents excessive loss of pollen to pollen-eating beetles and non-pollinating flies and moths which are active in cool weather and even at night. Most species of *Thelymitra* open their flowers only on sunny days when the temperature exceeds 25°C, but this varies from species to species and there are some clones which even keep their flowers open at night.

As their bee pollinators travel fast and far in search of food, the sun-orchid flowers need to be fairly large and brightly coloured to attract their attention. The flowers usually face upward and the plants grow in open situations so that they will be conspicuous to the bees flying overhead. The *Thelymitras* are thought to mimic the main food flowers of the bee species which most often pollinates them. In the Australian bush these are often blue, yellow or pink-flowered lilies. The sun-orchid flowers, since they offer no nectar, must attract the bees by being larger and brighter than the flowers they mimic and often they are sweet-scented as well. The sun-orchids usually have a raceme of several flowers which often open all at once. They also have the tendency to grow in clumps of 2-10 plants: all this serves to make them more noticeable to the bees. Each bee species is attracted more to some colour than others, depending perhaps on the colour of the flowers which provide most of their food. For this reason each sun-orchid species sticks to a single colour or a particular range of colours. The flowers of *T. antennifera* are always the same brilliant shade of yellow, *T. holmesii* is sky blue and *T. rubra* deep pink. Because the flowers they mimic are lilies with regular perianths the sun-orchids have reversed the evolutionary trend of the Orchidaceae toward zygomorphic flowers and have become regular.

Once the bees have been attracted by the bright colours of the sun-orchids their attention is held by the complex, irregular and often bizarre shapes of the column appendages which may look like the antennae, hairy brushes, legs or even faces of the bees. Perhaps the bee mistakes the column for an enemy in its territory, or even a female. In any case the bees do not land on the



*Map shows **Thelymitra** species diversity in Australia. Numbers indicate how many species found in each region.*

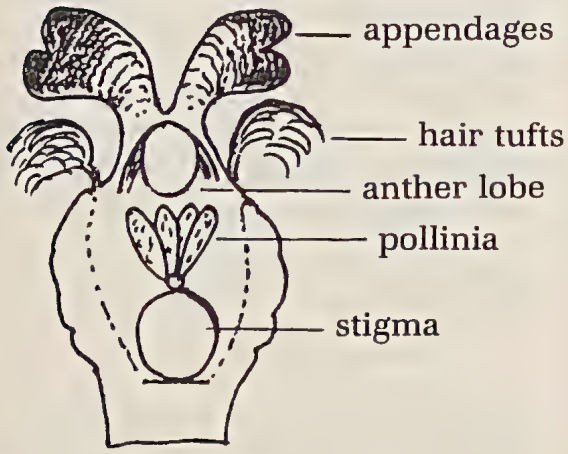


*Figure 1. Stylised **Thelymitra** column.*



*Figure 2. **Thelymitra** tuberoid.*

perianth but zoom straight in, on to the column and can often be seen grappling with it, collecting pollinia on their thorax (photo 1) or if it is powdery (most *Thelymitras* have mealy pollen) on their hairy legs. More rarely the bees feed on the stigmatic secretions and collect the pollinia on their heads.

It is important to note that the labellum of *Thelymitra* has no special significance as an attractant, as an attention-holder, insect positioner or even as a landing platform so it is not surprising that it has reverted to the typical unadorned petal shape. In any genus the flower features which are most important in attracting and holding pollinators are those that will develop and diversify most and for this reason each *Thelymitra* species is identifiable partly by its perianth colour and pattern but most importantly by **column structure** and **not** by labellum shape.

Many Thelymitras have **apparently** become unsuccessful in attracting pollinators and have become self-pollinating (i.e. *T. pauciflora, T. flexuosa, T. carnea*). These species have smaller, less-colourful flowers often with vestigial column appendages and seldom open. Nevertheless bees have been observed on flowers of these self-pollinated species and they do hybridise with others so it appears that their autogamy is a **back-up** rather than a **replacement** system of pollination.

Most Thelymitra species do not form colonies as their pollinators are highly mobile and it is to the orchid's advantage to be as widespread as possible. A bee may collect pollinia from one flower and if it is territorial, transfer it to another more than a kilometre away.

Hybrids: *Thelymitra* species frequently hybridise, especially in areas disturbed by man's activities. Grazing and destruction of the flowers which *Thelymitra* mimic may upset the bees' normal feeding patterns forcing them to gather nectar from a wider range of flowers; consequently, bees which normally visit only blue-flowered sun-orchids might well visit pink or yellow ones. *T. x chasmogama* is a hybrid with slate-pink flowers and has resulted from crossings of the pink *T. luteocilium* and the blue *T. nuda*. Hybrids between the yellow-flowered *T. antennifera* and the pink *T. rubra* often have flowers which are crimson with gold edging. As yet no hybrids have been recorded between the yellow and the blue-flowered species. I wonder what colour flowers such a crossing would have! Another explanation for natural hybrids is provided by the hover-flies which visit the flowers indiscriminately in search of pollen and nectar. They are very careful feeders and I have never observed them to pick up sun-orchid pollen, but the powdery pollen of the self-pollinated species, i.e. *T. pauciflora* and *T. luteocilium* is very fine and it is probably no coincidence that these self-pollinated species are more commonly involved in crossings than any others.

Cultivation. Native terrestrial orchids are rapidly gaining in popularity with Australian orchid growers but what have the *Thelymitras* to offer? At present they have been given very little consideration for two main reasons. Firstly, since the flowers remain closed most of the time and seldom open inside they do not win prizes at shows and their beauty can only be appreciated briefly. Secondly, they are not easy to grow, their leaves turning black and damping off at the base unde cool damp conditions. Recently, however, it has been realised that many species have clones which open their flowers more freely, i.e. *T. venosa* 'var. *magnifica*' and some *T. variegata* and these clones are now being introduced, often in "cool" glass-houses where the leaves can be kept dry and the extra warmth encourages flowers to open more often. Transference to a heated glass-house at flowering even keeps some plants flowering at night. Some sun-orchids have flowers 5 cm across and their brilliant colour, regular shape and large racemes with all flowers open together, make them an excellent proposition for improvement by line-breeding and hybridising. (My own work with *Thelymitra* hybrids has been restricted to remaking natural hybrids to check their parentage and recently I have crossed *T. luteocilium* and *T. antennifera* to give *T. x macmillanii*).

Colouring substances. Morrison (1980) discussed how water-soluble anthocyanins produce the brilliant blues and pinks in the sun-orchids whilst the yellow-flowered sun-orchids gain their colour from carotenes which are not water soluble and, in the case of *T. fuscolutea*, green from chlorophyll. It is interesting to note that in a hybrid between a yellow and a red-flowered species it is likely that both carotene and anthocyanins will produce colour in the hybrid flowers, the latter masking the former and yet being accentuated by it which explains how the dull pink *T. luteocilium* crossed with the bright yellow *T. antennifera* will produce the brilliant red-orange *T. x macmillanii*.

Selected species. *Thelymitra aristata:* (photo 2) This is the largest of the sun-orchids, often a metre in height, with 20-30 flowers each 4 cm across, ranging in colour from azure blue through to mauve or almost pink. The leaf is lanceolate and fleshy, some 20-40 cm long, with a fleshy, clasping stem bract, the whole plant often glaucous. The species is common in south-eastern Australia and has been grown successfully in cultivation using pure bush loam. The flowers open freely in

warm weather and will remain open on warm humid nights. The delicate fragrance is an added bonus.

Thelymitra crinita: A spectacular and common species throughout the south-west of Western Australia. The sky-blue flowers are 3 cm across and the 3-10 flowers all open at once, blooming freely on any sunny day. Even when not in flower the thick ovate leaves, which are green above and purple below and usually crinkled, are quite attractive. It is easier to grow than the narrow-leaved species and does well in any well-drained bush soil.

Thelymitra fuscolutea: (photo 3) Another broad-leaved species, widespread in the south-west of Western Australia also occurs in South Australia and Victoria. The flowers are greenish or yellowish with brown or orange spots and blotches. Most forms are self-pollinated and apparently the pollen vector no longer exists in the east. These self-pollinated forms are not worth growing as the flowers only last a day or two and seldom open but there are clones in the west which are still pollinated by insects (perhaps by wasps rather than bees). These clones have brighter colours, the flowers are more star-shaped (about 3 cm across) and they open freely even in cool weather.

Thelymitra ixioides: This species is the emblem of the Australian Native Orchid Society. It ranges in size from a small delicate plant to almost a metre in height. The larger clones, mainly from New South Wales, have a raceme of up to 40 flowers, each 3 cm across, of a delicate purple heavily spotted with blue. These are held on a slender but erect scape and open freely in sunshine. Line breeding is at present being carried out to produce a hardy floriferous plant but for many of us this orchid has proved difficult to cultivate.

Thelymitra rubra: (photo 4) This delicate, pink-flowered species from the south-east of Australia is very common in Victoria and South Australia. It has not proved easy to grow but could be useful in breeding. The very attractive pink with purple-spotted hybrid *T. x irregularis* which is supposed to be a *T. carnea x T. ixioides* could be re-made using instead a deep pink *T. rubra* and a large *T. ixioides*. I'm sure the result would be magnificent.

T. variegata: This is perhaps our most-celebrated sun-orchid. It is very widespread in the near-coastal sand plains of Western Australia but is by no means common. The rich orange and purple tints of its flowers are further enhanced by an iridescent sheen which can only be appreciated on living plants. The unusual spiral-shaped leaf is shared by several species of the *T. spiralis* complex and *T. variegata* itself may be divided in future into two taxa. Picture postcards of *T. variegata* are very popular with tourists to the west, few of whom ever get to see actual plants. A magnificent illustration of this species can be found in the Australian Orchid Review of March 1983 (page 38). The vernacular name "Queen of Sheba Orchid" is most appropriate.

REFERENCES:

Bates, R. (1983) "Pollination Concepts in *Thelymitra*" **J. Nat. Orch. Soc. S. Aust.** 7: 8-9.

Beardsell, D.V. & Bernhardt, P. (1982), in E.G. Williams et al, ed. "Pollination '82" (Univ. of Melbourne).

Morrison G.C., (1980) "The Floral Anthocyanins & Thelymitra ixioides" **Orchadian** 6: 160-161.

Nicholls, W.H. (1969) "Orchids of Australia", the complete edition.

Acknowledgement: I am indebted to Ron Heberle of Albany for the photograph of *Thelymitra cucullata.*

38 Portmarnock Street, Fairview Park 5126

Sun can cool your greenhouse

A new idea in ventilation of greenhouses has been designed by the Ecolope group in Seattle, Washington. The idea, a solar chimney, harnesses the power of the sun for ventilation.

The chimney consists of a two-foot-square shaft rising twelve feet higher than the top of the greenhouse. The south side is glazed*; the other three sides are sheathed in exterior grade plywood, painted black on the inside. This black paint should be either a flat black paint or a paint designed for use in solar collectors.

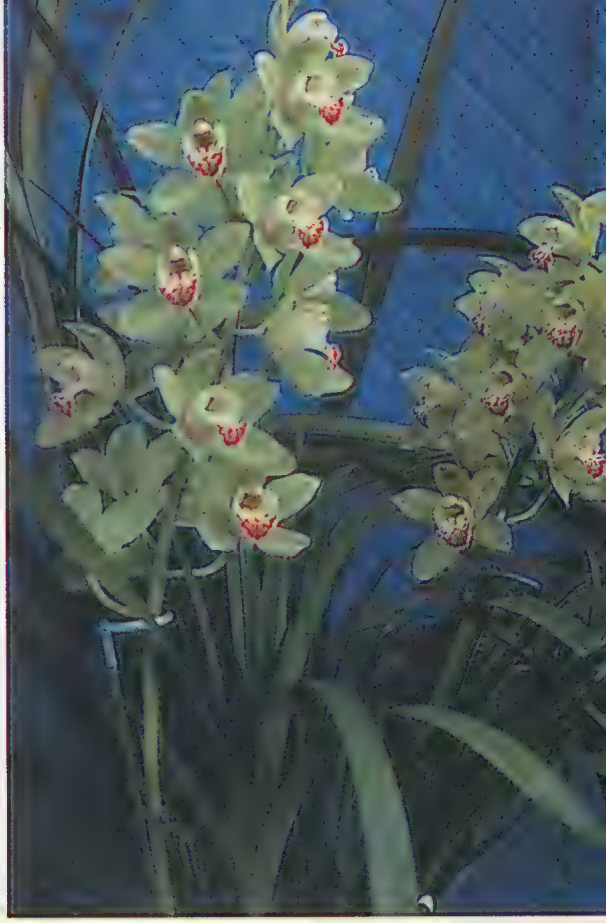
As the sun heats the air in the chimney, it causes an updraft which increases with the rate of the solar heat input. The airflow into the base of the chimney is through a vent located at the top of the greenhouse. You should install, on the greenhouse end of this vent, a styrofoam panel trap door to control airflow out of the greenhouse. This panel can be opened and closed, according to temperature, in a number of ways, including:

- A free-swinging, top-hinged styrofoam door, opened and closed purely by airflow;
- A door opened and closed by an electric motor is controlled by a thermistor. (A thermistor is a solid state thermostat which is pre-set to one temperature);
- A door opened and closed by an electric motor which is controlled by a thermostat, thereby allowing the control temperature to be changed;
- A door opened and closed by a freon control arm which works by the temperature heating the freon, moving it down the arm to tip the door open (This is a simple, counter-balance mechanical system, using no electricity.).

This chimney should provide the equivalent ventilation of a large greenhouse fan (airflow of approximately 900 cubic feet per minute should be attained on a hot, sunny day).

*Note: In this hemisphere it is the northern side which would need glazing.

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Dazzling colour and beauty



***Thelymitra venosa* R. Br.**

Dark striping enhances the beauty of this species and gives a specific name. This is the first photo ever published of it being pollinated by a bee. It is usually self pollinated. Flowers open freely in sun.



T. antennifera* x *T. rubra

A natural hybrid from Knitpo in South Australia. Notable for unusual colour. One parent shown top right. Flowers may be up to 4 cm wide. Habitat range is from south-eastern Australia to Western Australia.



***Thelymitra aristata* Lindl.**

A specimen from Mt Lofty, South Australia, the first of this form to be published. Flowers up to 23 mm expand readily in sun. Found all States and New Zealand. It is scented.



***Thelymitra pauciflora* R. Br.**

Photographed at Mt Lofty. Flowers up to 23 mm wide but needs very hot sun to open. Colour varies from white to mauve and purple. In all States and New Zealand.

Dressler describes the genus *Thelymitra* as "not having very orchid-like flowers" and refrains from assessing its phylogenic status.

Australia's genus Thelymitra



***Thelymitra fuscolutea* R. Br.**

One can appreciate its common name of Leopold Orchid. This specimen is from West Australia. The habitat extends to South Australia and sparsely into Victoria. Flowers can be up to 3 cm wide.



***Thelymitra cucullata* Rupp**

Flowers up to 2 cm wide. Notable for attractive blotching but short lived. Grows near peaty bogs in Albany area. Very rare. This is first illustration published.

Seven photos are by R. Bates and that of *T. cucullata* by R. Heberle.



***Thelymitra rubra* Fitzg.**

A nice form of the 'Pink Sun Orchid'. It needs bright sun to open and is mainly self pollinated. Flowers can be to 18 mm wide. In all eastern States and South Australia.



***Thelymitra holmesii* Nicholls**

Nicholls named this in 1933 but reduced it to a variety of *T. pauciflora* in 1943. Noted for its deep colour. Endemic to south-west Victoria.

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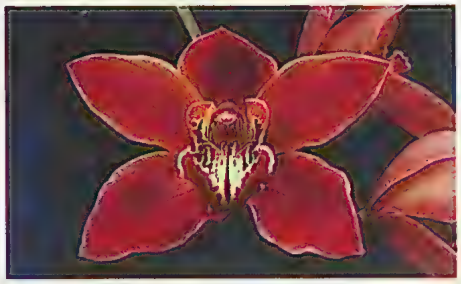
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TOP: Wallamurra 'Europa'
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BOTTOM: Wallacia x Fascination 'Wondabah'
Due for release Autumn 1986.

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A point of view on cymbidiums

R.W. HODGINS

Production from cymbidium nurseries falls into three categories. Note the word production rather than hybridisation, which fits the first two classes only but not the third, propagation by meristem tissue culture known as mericloning. With this last there are dangers for the buyer.

It would be unreasonable to single out either one of the two main types of production as being more important than the other. Both serve a vital function within the industry. Both require skill and knowledge. Both serve the consumer in different ways.

The first of these classes is concerned with the hybridising and raising of plants for the cut flower trade. This is an enormous market which demands quality. The effort Mr Alvin Bryant has put into this aspect is outstanding and one can only regard him as a hybridiser of great skill.

The second category is concerned with exhibition cymbidiums. This section interests the majority of hobby growers desiring to show or flower for pleasure, even though some may use their surplus as cut flowers.

We have judging standards so that the best may be recognised. We have countless shows each season patronised by hundreds of growers exhibiting their finest clones. These shows have become the events of the year for cymbidium growers and no doubt have been responsible for encouraging many new growers to a wonderful hobby.

Each year we have a choice from thousands of new seedlings on the market and many crosses are described as being potential showbench or award material. The newer grower reading and comparing descriptions must be bewildered. How could there be so many potential champions in one season? Well of course there can't be, the odds are not much better than a lottery. But at least with reliable crosses you generally finish up with something worthwhile.

There is not the slightest doubt that the established nurseries give a great deal of thought to their breeding programmes. Study their successes before you decide where and what to buy.

I have sometimes been accused of producing seedlings that have no further use in a breeding programme. This is true, but they were bred for one purpose, exhibition, and have on occasion been exceptional. I have never once been asked the breeding potential of a cross. Most people are not interested in that aspect, those who are would know.

It is in buying the third category, mericlones, that a grower could be at risk. I suggest you take care to buy from the owner of the original plant.

Mericlones produced from mericlones, and this can be repeated again and again, will result in a much higher proportion of undesirable mutants.

It is frustrating and disappointing, after two or three years raising a mericlone, to find that the flowering is not up to the high standard of the original plant.

The original hybridist, should more mericlones be required, will not use a mericlone but will take another meristem from the original plant.

Of course Plant Breeders' Rights, akin to Patent Rights, would ensure that all plants sold would be from the original plant. Such rights would also induce the release of some superb orchids which are now tightly held. Thus the hobby grower could buy with confidence from a wider choice, knowing that after two or three years culture he could be proud of his flowering.

Meanwhile ask yourself when you are looking around for top mericlone stock whether what you are being offered is a propagation from the really original clone.

PO Box 108, Frankston, Vic. 3199

MERICLONE MUTANTS

The December 1983 *American Orchid Society Bulletin* has a fascinating article on the appearance of a splash petal cattleya from a population of *Blc.* Greenwich 'Irish Flair'. In the beautiful publication *Quality Stream Cattleyas*, page 54, there is *Lc.* Cuiseag illustrated, a mutation from a population of meristem plants (variety not given) — another splash petal. It will be interesting to see how common a phenomena the appearance of splash petals is in populations of meristem plants. Will they impart this characteristic to any of their offsprings? Only time will tell.

Other variations will most likely be noted — chance production of plants with higher ploidy is well documented. While most mutants in mericlones can be expected to be a backward step, the appearance of a new worthwhile charactertistic may be an important breakthrough in advances in further breeding.

Rockhampton Orchid Society Bulletin

Journal of the TQOC

After looking through the latest issue of *Phaius* your editor wonders why so many Queenslanders and warm growers don't subscribe to this bulletin.

True the format is the most economically possible but editor Doug Benson packs a lot of useful data into an issue. Except details and price of subscription. Maybe next time.

However a copy can be bought through member societies of the Tropical Queensland Orchid Council for 50¢.

Protection against damage to orchids by frost

DR. PETER ADAMS

Acknowledgements to the Orchid Species Society of Victoria

A lot of people forget that water freezes at 0°C and below, inside and outside of plants, and confuse the concepts of frosts and freezing. A frost occurs when recorded air temperature minima are close to °C and ice crystals form on the surface of plants and usually plant tissue is not frozen. When minima of −2°C and below are recorded, especially early in the evening as was the case in Melbourne, July 1982, plants experience a lot more stress than that of frosting. Plant tissue actually **freezes solid** when exposed to −2° to −5°C air temperatures for some hours, and upon thawing lethal damage occurs. Some species from cold climates can freeze solid and thaw out undamaged. There is a very real difference between a frost and a freeze, and minus 1 or 2 extra degrees or exposure for an extra hour or two can result in a vast increase in amount of damage.

There are several techniques frequently used to protect against a frost, for example sheltering plants under various covers, using fans and spraying water over them. However a freeze requires more sophisticated methods than these, including structural alteration to houses, to be certain of effective protection.

A thermostat-controlled glasshouse is a useful item, but it is expensive and defeats the purpose of the cold and cool grower. He must find other strategies.

The first step is to know your orchids particularly their natural habitats, and to identify species with resistance and sensitivity to cold extremes. Cold resistance is determined by the innate structure of orchids, for example by the presence of insulating hairs, thick cuticle and cell walls. In general, orchids from low altitude, equatorial and temperate regions are adapted to warm conditions and are frost sensitive. If a species never experiences a frost in its natural habitat then beware of winter cold extremes. Orchids from high altitudes, for example *Dendrobium falcorostrum* (often snow covered in the Antarctic Beech forest) will withstand freezing conditions. However, low altitude *D. speciosum, kingianum* and *aemulum* will lose their leaves after freezing, and if temperatures are much below zero these pseudobulb apices are frozen and flower buds are destroyed.

Cymbidium madidum is very cold sensitive and whole bulbs and plants can be lost. The best advice I can offer is that all plants in a collection should be reviewed for cold sensitivity and set aside for special housing before next winter begins.

Having identified a group of plants at risk, you can plan a small house or area which can be enclosed. Application of fibreglass or plastic sheeting, for example bubble plastic or polyscrim, to the sides and roof of a small bush house may not be too much trouble in late autumn. A confined area is essential to obtain a heating effect, as mere circulation of sub-zero air in an open house affords no protection at all. After enclosing the area a small fan heater regulated by a thermostat set at between 5 and 10°C will ensure that the area remains above 0°C on the coldest nights. It may only operate for a few hours next winter, but this will be sufficient to protect plants whenever sub-zero minimum temperatures occur.

If only a small number of plants are at risk, a holiday inside your living area on the coldest nights is preferable to a death sentence outdoors.

School of Botany, University of Melbourne

Orchid people

Joe Williams and his wife Amelia (Mill) are fighting cancer the practical way. Joe retired in 1972. He is well known in Sydney orchid circles. One day they saw a television show about a young cancer victim so they decided to hold a fete to raise money for the Cancer Research Fund and the National Heart Foundation. They raised $1330.

When a sister succumbed to cancer they held another fete. It was advertised in the local paper and hand-distributed pamphlets.

Joe and Mill and their family worked like Trojans, sewing, baking, knitting, and potting up orchids. Neighbours and local retailers gave generously. Said Joe, "We had cakes, jams, pickles, sweets, fancy work, books, toys, white elephant stall, afternoon teas and flowers."

Joe grew plants and sold some of his orchids. His stall alone took $650.

The final result was $3030. Joe and Mill had the warm satisfaction of helping in the fight against cancer and heart disease.

Congratulations Joe and Mill.

"Science, when well digested, is nothing but good sense and reason." — *Leszenski Stenislaus.*

Orchid People

Syd Monkhouse's behaviour can only be described as "demonic", that is if the phrase "demon for work" has any meaning. He has just been elected for a third term as president of the Orchid Club of South Australia. Syd has already served two three-year terms. He would have to be the longest serving officer on any orchid committee. For many years he was secretary of the SA club before his first term as president. Between terms as an officer he has remained on the management committee.

Syd served a very successful term as president of the Australian Orchid Council. During his term he presented many original ideas for consideration by the other states.

Good humouredly Syd has remarked that he can't call himself the "new" president but perhaps "reconditioned president" would be appropriate.

"Reconditioned" implies a new burst of power. The programme outlined by South Australia's "reconditioned president" means just that. New initiatives are being enthusiastically received by members. Congratulations Sydney Monkhouse.

* * *

For many years John Harris has been a most efficient secretary for the Orchid Club of South Australia. This year he decided to relinquish the post. But not for a rest. Instead he has taken on the arduous task of chairman 1986 Australian Orchid Conference Committee. This is to be a very special year for South Australia in general, consequently John and his strong committee are making special events to ensure the 1986 conference will be a memorable one.

* * *

Sixty years of orchids. That's the record of Ken MacPherson, notable hardcane hybridiser from Proserpine, now that he has reached his seventy-first year. Marj Purnell says that as a small boy Ken often got into trouble and had the seat of his short pants tanned, because instead of bringing the cows home on time he'd be up a tree examining orchid flowers.

His early crosses of *Dendrobium canaliculatum* and forms of *D. discolor* resulted in registrations of his 'Gloucester' line of hybrids. Most of them are still among the top hardwoods, *D.* Gloucester Sands and *D.* Gloucester Charm for instance.

Recently Ken has registered about twenty of his newest hybrids. Many of these are producing super clones.

* * *

John Atkins is the new president of the very active Southport and Districts Orchid Society. Although only 37 years old John has left his imprint along many orchidaceous paths. He was a member of Eastwood Orchid Society at the age of 15. His family moved to the Central Coast and he became secretary of the Gosford Orchid Society at the age of 18.

John then spent many years overseas, including ten years in Papua New Guinea. The first five years were spent in Rabaul, Lae and other parts of the highlands; the second five years in Port Moresby. In Moresby he met Andree Millar and was inspired by her creation of the Botanic Garden there, and by her work on orchids. John was secretary of the Southport Society before being elected president this year.

* * *

Frank and Evelyn Williams are cheerful folk to meet at any time, but at the Miami Conference Show bumping into them (it was that crowded) was like inhaling a breath of Aussie gum tree scented air. Evelyn must have got some great camera shots to show the orchidophiles back in Maryborough.

Frank and Evelyn travelled independently. On the way to Miami they dropped in on Las Vegas, the Grand Canyon, and New Orleans. After the conference they had a good look around Florida, calling in at Orlando and the famous Selby Gardens. Then they waltzed into Washington, New York and Niagara Falls. The latter all iced up.

They stayed with a friend in Toronto whose glasshouse was built over a metre into the ground to conserve heat, and where they saw Australian species and hybrids in flower. Next stop was Calgary, the starting place for a bus trip over the Rockies to Vancouver.

Then to San Francisco, followed by a wonderful bus trip down the west coast to San Diego in time for the annual orchid show. Then to Honolulu for five days and a look at the sights and nurseries. It is hoped their thousands of plants did not miss them too much.

Evelyn's slides would make for a wonderful society meeting.

* * *

Rob Manning whose letter on a yellow form of *Cymbidium canaliculatum* appears in this issue, is an up-and-coming member of the Orchid Society of WA. He is 27 years old and has been growing orchids for six years. He holds a Biology degree from Murdock University. Like so many West Australians he has made a special study of native orchids in the wild.

Orchid Stamp Forum at the 11th World Orchid Conference

BARRY COLLINS

An Orchid Stamp Forum was held for the first time at a World Orchid Conference at the recently-held 11th World Orchid Conference in Miami.

The forum was held in the Conference Centre on March 7, 1984. The chairman for the forum was Mr Andy Lanier from Lake Worth, Florida. The other speakers were Sam Flagler from Jonesville, Texas, Peggy Alrich from Orlando, Florida and Harry Wilshaw from Sollihul, England.

The meeting opened at 1.30 pm and there were about sixty persons in attendance, including the officers of the International Orchid Stamp Club, Ron and Myra Chalmers, Robert Moon and myself. There were visitors from Canada, South Africa, England, Puerto Rico and a majority of the local States.

Peggy showed slides about a number of interesting orchid stamps. Sam talked on postal stationery, Harry spoke on "How to Exhibit Your Orchid Stamps" and finally Andy spoke on dealers and sources for materials for your stamps. A wonderful afternoon was had by all. I feel everyone who attended this forum, learned something new about orchid stamp collecting. At the conclusion of the forum, Andy invited all present to inspect the private collections of stamps and stationery owned by Peggy, Sam and himself.

To celebrate the wonderful occasion of the 11th World Orchid Conference, being held in Florida, the US Postal Service issued four orchid stamps. They were designed by Mr Manabu Saito of Stillwater, New Jersey, and featured orchids native to the United States. The orchids were (1) Wild Pink Orchid (*Arethusa bulbosa*), which is indigenous to Florida; (2) The Yellow Lady's Slipper (*Cypripedium calceolus*) found in the mid-west; (3) Spreading Pogonia (*Cleistes divaricata*), a native of the north-east; (4) Pacific Calypso (*Calypso bulbosa*) found along the Pacific Coast.

They were released on Monday, March 5, at a dedication ceremony held at the Conference Centre. Presiding was Mr John Murchake of the American Orchid Society. The US Air Force ROTC from the University of Miami, who presented the colours. Mr Robert Scully Jnr, conference chairman, Mr Reinardo Salgado, sectional centre manager postmaster, Mrs Mary Owens, member Citizens Stamp Advisory Committee, Dr John Popenoe, director Fairchild Gardens, Dr David Brown, president American Orchid Society, Mr Thomas A. Fennell Jnr, president South Florida Orchid Society and Mr Manabu Saito, designer of stamps. The ceremony was very impressive, which one expects from the Americans. At the conclusion of the ceremony, the stamps were on sale to the registrants and general public. A long line formed at the post office booth to purchase the first-day cover. This was so important to have a Miami cancellation on the first-day cover. A special silk screen cachet was on the first-day cover. One could purchase a block of four stamps or have each stamp individually cancelled on a separate first-day cover.

Back home here in Australia, I am pleased to report that the Orchid Stamp Club International has increased in membership. We now have members from USA, England, France, Holland, Belgium, West Germany, Italy, Norway, South Africa, New Zealand, Brazil, Canada and all Australian States. The interest shown is amazing and is probably due to the fact that our club is the first in the world to cater for "Orchids on Stamps" collectors.

Our club now has a slide programme of "Orchids on Stamps". This programme and a possible display of stamps may be available to orchid societies in the near future. Any orchid society who may desire to have something new at one of their monthly meetings, should contact either of the below-mentioned persons:

Mrs Myra Chalmers, 25 Turriell Point Road, Caringbah, NSW 2229.

Mr Barry Collins, PO Box 131, St Pauls, NSW 2031.

See Singapore

Without doubt the best time to see what is probably the world's cleanest city (they are extra tough on litterers there) is during an orchid show.

The Fifth ASEAN Orchid Congress is being held there on August 1 to 7 next. That means a mighty big and colourful show of top, world-class orchids.

The ASEAN Orchid Congress is a periodical gathering of orchid enthusiasts from all over the world. The Congress is hosted by each of the ASEAN-member countries in turn, to discuss and evaluate the needs and interests of orchid cultivation and research in the ASEAN region. A seminar is held in conjunction with the show, also functions and a dinner.

For information apply to The Organising Secretary, Fifth ASEAN Orchid Congress, C/- Parks and Recreation Department, Botanic Gardens, Cluny Road, Singapore 1025.

Miami

The splendour of the Ninth World Orchid Conference Show in Miami, Florida, can best be conveyed by colour pictures. In this issue we have not the space to do this so a detailed report will appear in the September issue.

The show was big, impressive, a cross-section of wonderful developments in hybridising and a glittering collection of floral gems. Many species and botanicals were lovingly presented in displays by growers conscious of the uniqueness of their own ecology.

Conference registrants numbered over 3,500. More than in any previous conference, but a disappointment to the organisers who had hoped for 6,000.

However, the general public poured into the huge Coconut Grove Exhibition Centre like a dense school of sardines to visually devour orchid plankton, emerging richer by the aesthetic nourishment.

Australian growers Messrs Kevin McFarlane and Fred Alcorn won many individual prizes. Of these more in September.

Although faced with transport difficulties and the fact that March is the worst period for flowers in Australia, the Australian exhibit was very creditable. Those who contributed flowers and those who contributed their time to establish it by collecting, packing, despatching and setting up, are to be congratulated.

RECORD TERM OF OFFICE

Mr Syd Monkhouse has been elected for a third round as president of the Orchid Club of South Australia. The first two terms were each of three years. All orchid growers in Australia will wish him well. What a lot he has done for growers everywhere!

ROCKHAMPTON ORCHID SOCIETY

That fine orchid grower Mr Rod Elder is now president of Rockhampton. New secretary is Mr Brian Maxwell and correspondence should be addressed to him at PO Box 5949, Rockhampton Mail Centre, Rockhampton 4702.

PORT AUGUSTA ORCHID CLUB

Could you please give a lecture on orchids on your way through Port Augusta on the fourth Wednesday of any month. To get in touch (with plenty of notice) contact secretary Betty Vile, PO Box 1762, Port Augusta, South Australia 5700. Geoff Clark is president.

TO CONTACT ORCHID CLUB OF SA

The Orchid Club of South Australia has vigorous plans for 1984-85. You can help by making sure your mail goes direct to new secretary Mr G. Heylen. Note his address in your records now: 5 Richman Avenue, Prospect, South Australia 5082.

Poor William

I wonder what it is about this name,
that it is so generally and so persistently
mispronounced.
It is not difficult nor is it ugly:
yet another syllable is added
to upset the balance
of a simple gentle word,
making it a staccato hideosity.
In 1824 Lindley named an orchid for
William Cattley
and called it Cattley-a.
I ask where CAT-TER-LAY-ER comes from?

Mifanwy Pirie in *South African Orchid Journal.*

Twelfth World Orchid Conference

Japan has been preparing for the 1987 Conference for three years now. This was reflected by the special information centre at Miami. In addition a fine display of orchids demonstrated the innate artistry and aesthetic perception of Japanese growers.

Chairman of the Working Committee for the Twelfth Conference is Mr Issaku Nagata. In a splendid booklet he expresses his appreciation of the opportunity provided by the AOS and RHS to introduce his country to orchid growers.

There are about 100 societies in Japan and orchids are now an important industry.

Japanese growers have inherited a fine tradition of flower culture, and, importantly, a millenium-old instinct for beauty in display. They have selected top plants from all over the world and applied their knowledge and research to hybridising. Thus visitors from abroad will find a uniquely-different aspect of orchid culture.

Unique too is the atmosphere of Japan itself, dominated by volcanic peaks and cherry blossom.

The conference period, March 17 to 25, is Springtime, and, because the seasons in Japan are quite differentiated, it is truly a time of awakening nature. Yet the climate allows most genera to be grown.

Spring is the time for colourful weddings and parties beneath the fragrant branches of cherry trees. School and business cycles start anew in Spring and museums of fine art, culture and natural history feature special exhibitions.

Tokyo Palace Grounds, magnificent shrines and temples, theatres and sports are catered for by special tours which transport western visitors into another world.

Japan is famous for its wild orchids. Many of the lovely genus *Cypripedium* should be in

flower at conference time. There are eighteen species of *Calanthe*. Most of the eight delicate species of *Orchis* flower in early summer with small purplish to crimson flowers.

Easily grown is the terrestrial *Habenaria radiata*, its many fimbriated bird-like white flowers create a picture on a slender stem.

Neofineta falcata is an exquisite little plant with quaint 2 cm flowers, white and fragrant, each with a long spur. Another monotypic plant is *Sedira japonica*, recently hived off from the genus *Angraecum*.

Cultivation of small terrestrial cymbidiums in fine china pots is a gracious Japanese art. Each plant is grown for leaf display and flowering is an enhancing feature. Special forms of the species *Cymbidium goeringii* command big prices in Japan.

Clubs for native orchids exist and no doubt will exhibit at the conference show.

Japanese breeding is influential. We all know the Yamamoto line of softcane dendrobium hybrids. Cattleyas have achieved great popularity with Japanese growers, particularly the miniature strains. The latter are more cold tolerant, have clear bright colours and bloom profusely. The Twelfth Conference Show should have many of these little wonders.

Japan is only one plane hop away for most Australians. Hopefully bulk booking concessions will apply to make a visit reasonably low cost. This magazine will keep you informed. Keep the time in mind: March 1987.

Thirteenth World Orchid Conference

It is to be in New Zealand in September 1990. Exciting details will be in the September issue.

A HEALTHIER WORLD

A report in the *North Shore Orchid Bulletin* is significant. Some members spent a holiday weekend at Barrington House in the mountains north of the Hunter River. While out for a full day walking and looking at orchids in the wild they eventually arrived at a rendezvous for a cuppa. Fire set, water in billy, much anticipation of a good well-earned brew . . . but . . . not one person had a lighter or matches, not could any passer-by offer a spark. A quick count of people was made, the society party numbered 26 NON-SMOKERS (some only recently reformed) and about ten other people were close about. Remarkable.

Your editor notes that one orchid society has decided that meetings are to be non-smoking affairs. Have you noticed too how few smoking compartments there are on trains.

The three princes of Serendip, of fairy-tale fame, were noted for their acute perception of things and were always making discoveries by accident. This prompted the writer Horace Walpole to coin the word *serendipity* — the art of discovering something you are not looking for.

Ninth Australian Orchid Conference

THERE IS STILL TIME

For four days in September the orchid scene will be focused on Melbourne and indications are that it will be an outstanding success. Registrations from all states and applications for show space are beyond expectations. By the time these notes are published show space may be fully booked.

It is certainly not too late to register for the conference and those coming from interstate are assured of southern hospitality, each of our metropolitan societies are acting as hosts to an appointed state and each are devising ways to ensure that your stay in Melbourne will be something to remember.

Every orchid club in Australia received brochures and registration forms, ask your secretary for one and be part of the 9th Australian Orchid Conference. Regular newsletters are being sent to all registrants keeping them up to date with what is happening.

A number of tours have been organised in and around Melbourne including such places of interest as Flagstaff Gardens and Flemington Racecourse (home of the Melbourne Cup). Also a visit to Polly Woodside and Marine Museum at Ripponlea a stately home set in acres of beautiful gardens. And of course the Dandenongs which should be a picture in September.

In addition to these, tours have been arranged for a visit to Ballarat and Sovereign Hill. Ballarat was an old gold mining town of the 1850s and Sovereign Hill recreates this atmosphere featuring working exhibits of early days such as newspaper office, bakery and theatre, and a Chinese Joss house, huts and shanties. Ballarat is famous for being the place of the Eureka Stockade where miners rebelled against the infamous licensing system. See this history!

These tours are being well patronised and immediate booking is recommended.

GLADSTONE'S GOOD USE FOR FLOWERS

Following a fine Easter Orchid Show at Fenton Motors members of the Gladstone Orchid Society cut the flowers from their plants and took them to the old people's home and the hospital. This has become an annual affair with them.

WINE BUFFS NOTE

Charles Madden Fitch in the *AOS Bulletin* noted that recycled wine corks work well when used in a compost with hardwood charcoal and coconut fibre. Orchids really go for this blend. Maybe it's the slight touch of sweetness from the wine, or it could be the heavenly bouquet.

The connoisseur may wish to see if corks from foot-trodden wine offer any improvement: the delicate touch of tinea might just send your cattleyas sufficiently into cloud nine to win a championship.

QOS ANNIVERSARY SHOW

F.M. OELKERS

"Happy 50th Anniversary QOS" was the theme selected by many affiliated societies that submitted displays at the 1984 QOS Autumn Show, held at the Kelvin Grove High School, April 13-15, 1984.

The twelve Brisbane and nearby-affiliated societies, by their enthusiasm and fine displays, indicated their loyalty to the parent body.

Competition between affiliated societies was, as always, very keen — resulting in dead-heats for first and third places.

West Brisbane (one of the dead-heaters for first), selected the theme "Hooked on Orchids". A large, old-time, waggon hook was used to suspend a large, wire basket, brimming with paphs and miniatures. A large magnifying glass was provided to view the miniature blooms.

This delightful display was very strong in cattleyas. *Lc.* Fortune 'Legacy', a yellow with dark red lip, was just one of the eye-catchers. Several excellent mericlones of *Blc.* Mem. Crispin Rosales and *Blc.* Bryce Canyon were on display. A fine specimen of C. Portia 'Coerulea' with more than 70 blooms received much attention. *Oncidium* Palalo Gold 'Kay' and *Oncidium sarcodes* x *O. leucochilum* carried the banner for that genus. *Dendrobium* Gloucester Sands and *Dendrobium* Margaret Joan Fell x *D. johannis* were two of the many fine dendrobes on display.

Redcliffe Orchid Society's display (dead-heat for first), as always, contained many fine dendrobiums.

A very fine form of *Dendrobium* James Dick, together with *Dendrobium* Circe 'Gail' dominated this quality display. *D.* Circe 'Gail' carried 15 non-furling dark blooms, arranged perfectly on a strong stem.

Other place-getters in the nine square-metre displays were Pine Rivers Society and North Albert (dead-heat for third). The Orchid Species Society and the Native Orchid Society of Queensland were placed fifth and sixth.

The Aspley Orchid Society won first prize in the competition for affiliated societies using less space. I noticed on this fine display a plant of *Lc.* Little Susie 'Nigrella'. This very dark form was a real eye-catcher. A very large plant with many blooms of *Paph. spicerianum* was one of the many features of this display. Thank you Aspley for 50th birthday greetings and, of course, the champagne.

Other placings in this section were second — Brisbane Orchid Society, third — Darling Downs Orchid Association, fourth — Craigslea Orchid Club and fifth — North Brisbane Orchid Society.

The Grand Champion of the Show was awarded to *Paph.* Delrosi 'Florafest' tabled by M.J. Ferguson of Toowoomba. This very desirable plant was recently awarded *HCC/QOS.* The two off-white blooms were neatly veined with red.

Stewie Heyden tabled the Reserve Champion — *Phalaenopsis* Polka Extra x Frank Gottberg. The eight 10 cm pure-white blooms were displayed to perfection on a good strong stem.

Champion Specimen was awarded to *Cattleya* Narooma 'Wayside Jean' exhibited by D. & T. Dittman. This prolific cattleya bore seven spikes each carrying eight mauve blooms.

The six-foot high *Dendrobium* Circe 'Gail', tabled by S. Heyden, won the Most Pre-eminent Entry and thus won the Australian Orchid Council Award.

The Champion Species Orchid was *Dendrobium phalaenopsis* 'Bicolor' that carried fifteen 9 cm blooms, tabled by K. McFarlane. This bicolor is an outstanding species dendrobium, perhaps the best bicolor in existence.

R.C. & A.M. Wilson were the proud owners of Champion *Cattleya C.* Oconee 'Menden Hall'. This very richly red-coloured cattleya is a "knock-out".

The Champion 'Cookie', *Den. bigibbum* var. *superbum,* was tabled by E. Thorogood.

Congratulations to novice-grower R. Wood for winning Champion Novice Entry with *Blc.* Mem. Crispin Rosales.

The 1984 Autumn Show will go down as one of the best Autumn shows ever, for both quantity and quality.

QOS Golden Anniversary Dinner

The Queensland Orchid Society's 50th Anniversary Dinner was held on May 4, 1984 at the Greek Community Centre. Patron of the QOS, His Excellency Sir James Ramsay, CBE, DSC, Governor of Queensland and Lady Ramsay, were guests on this very happy and enjoyable occasion.

To "colour" the happy anniversary celebration "gold" was chosen for decor and embellishments — gold serviettes — gold balloons — menu in gold letters and gold streamers.

With entree *Coral trout* 'Mary Mack' followed by *Chicken goodii* 'Malworth', where else could you be but at a dinner attended by orchid enthusiasts.

The food was superb, thanks to the skill of the chefs at the Greek Community Centre.

Mackay and District Orchid Society sent down a box of orchid blooms that were used in floral arrangements that greatly added to the occasion.

Groups from other societies attended and a large contingent from Brisbane Orchid Society, organised by past AOR editorial associate Phil Cotton, greatly swelled the attendance figure.

Letters of congratulations and best wishes from the Orchid Society of NSW and the Mackay and District Orchid Society were read.

After dining, wining and much reminiscing, the Hellenic Dancers entertained with fine dancing and afterwards invited willing, although a little out of condition, orchid growers to participate.

Our eloquent master of ceremonies, Doug Garner, attended to the formal side of the night but seemed to be short of breath after a prolonged session of Greek dancing.

A good time was had by all.

F. Oelkers

REDCLIFFE DISTRICT OS AUTUMN SHOW

The Society's Annual Autumn Show, opened by the Mayor of Redcliffe, Alderman R.J. Frawley, was again in the Kern shopping village April 5 to 7, 1984. The centre plaza with its high roof and paved courtyard proved an ideal setting for an orchid show.

Five massed displays featuring cattleyas of all types, paphiopedilums and species orchids with the main emphasis on dendrobiums.

Champion Orchid was a fine *Den.* Circe 'Gail' exhibited by K. and S. Howard. The plant carried 17 7cm x 7cm flowers perfectly arranged on a 65cm spike.

Reserve Champion was awarded to a *V. lissochiloides* x *R. storiei* hybrid carrying a 120cm three branched spike containing 57 striking scarlet red with orange overlay flowers. Exhibitors were D. and K. Wanka, stalwarts of the society for many years.

Champion Specimen Orchid was awarded to *Howeara* Mini Primi exhibited by K. and M. Smith. The plant, well established in a round natural cork hanging basket, carried over 30 15cm spikes containing over 600 individual flowers. Grower Ken Smith was awarded a CCC/QOS in 1981 for this plant which is flourishing in a bark and charcoal mix and has not been repotted.

Champion Species Orchid was awarded to a *Paph. spicerianum* carrying 15 blooms and was exhibited by Glenda Spindley.

Jack and Helen McKinley, life members of the society, carried off the award of Champion *Den. bigibbum* var. *superbum* with a well grown medium sized plant carrying four spikes of well shaped flowers of good colour.

Champion Novice Orchid was won by an excellent *Blc.* Coronet Bay exhibited by Mavis Denton participating in her first orchid show. Just goes to show how quickly some novice growers can be thrown to the wolves in open company!

An outstanding winner of its class was a *Paph.* Transvaal (*chamberlainianum* x *rothschildianum*) exhibited by J. and B. Raddatz. This well grown plant carried two 14cm x 10cm flowers and one bud on a 60cm stem and was a focus of interest to the public and discerning orchid growers.

The show was most successful and the society is again indebted to the management of Kern shopping village for its active sponsorship.

"Science is a language for talking ... about the world." — *Jacob Bronowski.*

Charity Orchid Spectacular

A charity orchid spectacular is to be held on the northside of Brisbane on July 13, 14 and 15, 1984, at the Zupps Motor Showroom, Gympie Road, Aspley.

The show will be staged by a total of twelve northside orchid societies and six local nurseries. Proceeds of the show will go to the Cystic Fibrosis Association of Queensland, a very worthy charity.

Entry to the show will cost $1.00 for adults and free for children. A lucky-door prize is also part of the attractions along with orchid plants for sale, orchid raffles, potting demonstrations and refreshments will also be available! Plenty of car parking is assured.

It was a BIG Conference at Townsville

Your short-sighted editor failed to pick up in a proof for the March issue that a 2 had been printed instead of a 3. This really is important because the report on the Eighth Australian Conference at Townsville conveyed that there were 266 registrants not the 366 actually there. That would be the most for any Australian Conference yet. Good on you Townsville folk.

Incidentally a few copies of the proceedings are still available. Crammed with good data by a distinguished panel. Only $10 including postage. From Townsville OS, PO Box 83, Townsville 4810.

MACKAY GIVES A HELPING HAND

Mackay OS made a donation to ANOS publication 'Orchadian' towards the cost of a five-year index. No grower of even a very few natives should be without this helpful quarterly. Under the skilful editorship of Joe Betts it has become a world-class magazine. Mackay treasures a letter of appreciation from ANOS.

Orchids from *Curtis's Botanical Magazine*

In this collected edition of orchid plates and text from recent volumes of Curtis's Botanical Magazine (founded 1787), the plates are reproduced to the same very high quality as in the magazine itself, and the text reprinted without change. The edition is limited to 1,000 copies only and will not be reprinted. Published at £27.50, the remaining copies are being sold at the Royal Botanic Gardens, Kew, price £15.00 (personal callers at the Orangery Bookstall only), or by post price £16.50, including postage and packing, from: Dr D.R. Hunt, The Herbarium, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AE. Make bank-cheques payable to 'Orchid Monograph'.

"Descended from the apes!", exclaimed the wife of the Bishop of Worcester, "my dear let us hope it is not true, but if it is, let us pray that it will not become generally known."

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HUNT FOR THE CORK BORER

The Townsville experience mentioned in the 1983 December issue, regarding borers in the cork slabs has evoked considerable interest.

Townsville growers think it may be the same borer that attacks Elk and Stag Horns. It is also probably the borer which attacks tea-tree logs when used as orchid hosts. The tea-tree (*Melaleuca*) borer will eat out the timber in a mount and leave the paper bark intact. The orchid will still be mounted but movement of the bark will damage the roots. So you have to re-establish the orchid.

It will pay to check your cork slabs for this villian and spray infected ones.

Cork is too good a medium for epiphytes to take any risk of early deterioration.

The Editor,

I am writing to you regards an item that appeared in the December quarter of AOR about borers in cork. I bought a quantity of natural cork and soon afterwards noticed dusting on my bench and on orchid leaves. I sprayed one piece about 12" x 6" which had a very nice plant of *D. monaphylum* attached with the insecticide Malathion, and as far as I can ascertain it seems to have done the trick. I do not know the long term results on borers or orchids so cannot say for certain about either. I wrote to Portugal Cork about my problem and I am enclosing their reply. If you think fit you might publish this letter. I will be sending any further infected cork to the Agricultural Department as suggested.

I also have granulated cork, which has not been affected. I might also add that I only sprayed the back of the cork as this was where the holes were appearing.

Max Stewart
"Bundilla", Ballengarra, NSW 2441

Letter from Portugal Cork Co Pty Ltd to Mr Max Stewart.

Dear Max,

Thank you for your letter of February 5 together with the AOR cutting regarding borers in natural cork bark. I also saw this piece in the AOR from Townsville and was somewhat concerned about it although I thought it was just a problem in that area with a local borer.

I would suggest that your problem is also to do with a local Australian borer as:

1. All our natural cork bark is fumigated in the container in Portugal in accordance with Australian Quarantine requirements which are most severe and,

2. I am also an orchid grower here in Melbourne using cork bark for mounting epiphytic natives and I have not experienced this problem nor has anyone else here to my knowledge.

If Malathion does not kill them I would suggest that you pack up a small sample of cork containing borers in a sealed plastic bag and mail the sample to your nearest State Agricultural Department, explaining the situation and asking them to identify the borer and recommend the cure.

We would certainly be interested to learn of any advice received from the Agriculture Department so we in turn can advise others if we receive further letters such as yours. Furthermore, if the borer can be identified and eradicated, you may care to write to the Australian Orchid Review and advise other growers what course of action to take.

I am sorry that I cannot be of more help to you but we are obviously not expert in borers.

G. Luke, Joint Managing Director

No it's not a one-off!

JOHN WOOLF

Dear Sir,

Regarding the article by Mr Gordon Hansen on *Cym. canaliculatum* 'alba', I would like to inform you of the clones of this variety found in the Darling Downs.

The first clone found was at Crows Nest by a friend of Mr Frank Simpson. When this was potted a division was taken for Mr Simpson and myself. The division belonging to myself was given to the Darling Downs group of ANOS to be tissue-cultured. This was done by Mr Nicky Zurcher and many mericlones were sold, however some difficulty was experienced in establishing the mericlones. We decided on the tissue-culture after years of fruitless selfing and sibling crossing.

At least six other clones have been found, one at Warwick, three at Chinchilla, one at Carnarvon and another at Crows Nest. To my knowledge these are still growing well.

32 Doncaster St, Toowoomba, Q, 4350

Green *Cym. canaliculatum*

The Editor,

I was very interested in Gordon Hansen's article on Kevin McFarlane's "green" *Cym. canaliculatum*, I hope he has some success at pollinating it.

With regard to the various colour forms detailed by Gordon, he hasn't mentioned a yellow form, I found one specimen whilst on a six month trip around Australia in 1979-80. The flowers were quite large compared to the normal form — and definitely not *madidum*. The tepals were a pure colour with a red blotch on the labellum. I did take a slide of the whole plant which I still have. I found it near Charters Towers. I grow a large range of species orchids myself and are very interested in the various forms that species attain.

Rob Manning
12 Cambey Way, Brentwood, Perth 6153

DIVERSIFY ! ! !

"I cannot understand why so many people spend so much of the year watching leaves growing when they could have flowers. Around Christmas and Summer there are flowering species of *Odontoglossum, Paphiopedilum, Dendrobium, Brassia, Masdevallia, Miltonia, Laelia, Lycaste, Bulbophyllum* and a variety of Australian natives, all possible to grow and flower with a bit of shadecloth."

M. Black in *Warringal OS Bulletin.*

SHOW DATES, MEETING NIGHTS AND ADDRESSES

ABBREVIATIONS. Details have been shortened where no ambiguity is likely. After meeting day the words "of month" are implied.

DATA. The listing includes all available data at time of going to press. However some societies have not completed arrangements and where possible the address of the last known secretary is given.

VICTORIAN ORCHID CLUB
Your Host Society
9th Australian Orchid Conference Show
September 12 to 16, 1984

KEW CIVIC CENTRE
Setting up
Tuesday, September 11, 1984.
Registrants preview — 3 pm
September 12, 1984
Join the fun. Register now.
Details from The Secretary, 9th Australian Orchid Conference, 37 Elliot Street, Mordialloc Victoria 3195.

ANOS Victorian Group. SPRING. National Herbarium. Contact secretary Don Smith, 6 Beacon Court, Lower Templestowe 3107. Ph 850 8624. Meets 1st Fri, National Herbarium.

Ararat OS. SPRING. Sec: Mr R. Selwood, Picnic Rd, Ararat 3377. Ph (053) 52 1845. Meets 2nd Fri, Church of Christ Hall.

Geelong Orchid & Indoor Plant Club. Sec: Mr L.J. Dale, 88 Albert St, Geelong West 3218. Ph (052) 9 7906. Meets 1st Thurs except Jan, TPI Hall, 163 Myers St, Geelong.

Gippsland OS. LATE WINTER. St Marys Church Hall, Sat 25/8 and Sun 26/8. SPRING. Civic Centre, Traralgon. Sec: H. Jacobs, PO Box 110, Stratford 3862. Ph (051) 45 6371. Meets 2nd Mon, 7.30 pm, Continuing Education Centre, Sale.

Goulburn Valley OC. SPRING. Shepparton Civic Centre Supper Room. Sat 22/9, 2-6 pm, Sun 10 am-4.30 pm. Marshal Mrs M. Miles, PO Box 1442, Shepparton 3630. Ph (058) 21 1705. Meets 1st Thurs.

Maroondah OS. WINTER. Vermont High School. Fri 13/7, 8 pm. SPRING. Same venue. Dates from secretary. An outstanding show. Sec: Mrs S. Campbell, 59 Anthony Drive, Chirnside Park 3116. Meets 3rd Fri, Vermont High School Theatre, Morack Rd, Vermont.

Maribyrnong Orchid Society. SPRING. Old Shire Hall, Calder Hwy, Keilor. Sat 22/9, 9 am-6 pm, Sun 10 am-5 pm. Sec: Greg Campbell, 'Kyle', Taylors Rd, Mt Macedon 3441. Ph (054) 26 2096. Meets 2nd Tuesday (except Jan), 7.45 pm Old Shire Hall.

Melbourne Eastern OS. WINTER. St Johns Hall on normal meeting night. Mon 30/7. SPRING. "The World of Orchids". Chadstone Shopping Centre. Mon 1/10 to Sat 6/10. Shop hours. Contact: R. Willott, 15 Omama Rd, Murrumbeena 3163. Ph (03) 569 6670. Meets last Mon (except Dec), St Johns Hall, Camberwell.

Midlands OS. SPRING. Contact secretary G. Sobers, Midland Hwy, Castlemaine 3450. Ph (054) 72 3167. Meets 2nd Tues, 8 pm at RSL Hall, Castlemaine.

Mornington Peninsula OS. WINTER. Karingal High School, Ashleigh Ave, Frankston. Fri 22/6, 8 pm in conjunction with monthly meeting. Members of other societies invited. SPRING. Check with secretary Dr J. Perry, 71 Mundy St, Mentone 3194. Ph (03) 584 9555.

Maribyrnong OS. ANNUAL SHOW. No details. Sec: Ms L. Scott, 7 Rainbird Court, Keilor Downs 3038. Ph 366 9060 for show and meeting night details.

Melbourne Eastern OS. WINTER. St Johns Hall, Camberwell 30/7. SPRING. "World of Orchids", Chadstone Shopping Centre, Dandenong Rd, Mon 1/10 to Sat 6/10. Shop hours. Meets last Mon, St John's Hall, 8 pm. Contact: R. Willmott, 15 Omama Rd, Murrumbeena 3163. Ph (03) 569 6670.

Orchid Species Society of Victoria. SPRING. Details from secretary, Mrs J. Lander, Lot 58 South Ave, Mount Evelyn 3798. Ph 736 3298. Meets 1st Thurs at Nunawading Hort Centre.

Ringwood OS. SPRING. Myer Eastland Shopping Centre. Set up Tues 25/9. Open Wed 26/9 to Sat 29/10. Shop hours but half-day holiday pm 27/9. Marshal: Jack Buchanan, 310 Maroondah Hwy, Ringwood. Ph 870 5201. A very big show with big prize money. Meets 1st Tues, Maroondah High School Community Centre, Maroondah Hwy, East Ringwood.

Sunraysia Orchid Club. SPRING. Jugoslav Hall, Deakin Ave, Mildura. Fri 21/9, noon-9 pm. Sat, 10 am-6 pm. Sun 18/9, 10 am-5 pm. Sec: Mrs J. Ashworth, 44 Hazeldene St, Mildura 3500. Ph (050) 23 3339. Meets 2nd Tues, St Andrew's Hall, Deakin Ave.

Warringal OS. SPRING. Heidelberg Technical High School, cnr Waterdale Rd and Bell St, Heidelberg. Sat 13/10, Sun 14/10. Sec: Mrs M. Murray, 60 McArthur Rd, East Ivanhoe 3079. Ph 49 3408. Meets 3rd Wed, Masonic Temple, Heidelberg.

SOUTH AUSTRALIA

Orchid Club of SA. WINTER. St Peters Town Hall, Glen Osmond. Sat 14.7, noon-6 pm, Sun 15/7, 11 am-4.30 pm. Trading table and tea and biscuits. SPRING FESTIVAL. Walter Duncan Hall, Wayville Showgrounds in conjunction with Royal Adelaide Show. Fri 31/8 to Sat 8/9. Show Marshal: Mr Alan Sullivan. Hon Sec: Mr Glenn Heylen, 5 Richman Ave, Prospect 5082. Meets 1st Thurs, Australian Mineral Foundation.

Gawler Dis O Club. WINTER. Gawler Education Centre. Sat 21/7, Sun 22/7. SPRING. Venue above. Sat 29/9, 10.30 am-5.30 pm and Sun 30/9, noon-5.30 pm. Sec: R.A. Furness, Lot 2 Uley Rd, Craigmore 5114. Meets 2nd Thurs, Masonic Hall.

Mount Gambier OS. SPRING. S.E. Land Home Centre, Sturt St. Mon 23/9 to Sat 29/9 in shop hours. Potting demonstrations. Sec: Mr J. Shaughnessy, 30 Reginald St, Mt Gambier 5290. Meets 4th Mon except Dec and Jan in St Martin's Church Hall, Edward St, Mt Gambier.

Native Orchid Society of SA. SPRING. Goodwood Orphanage Education Centre, 181 Goodwood Rd, Millswood. Sat 15/9, noon-8 pm. Sun 16/9, 1-5 pm. Sec: Mr E. Hargreaves, 1 Halmon Ave, Everard Park 5035. Ph 293 2471. Meets 4th Tues except Dec at St Matthew's Hall, 57 Bridge St, Kensington. Also shows in conjunction with SGAP in Walter Duncan Hall, Showgrounds, Wayville. Sat 22/9, 10 am-6 pm. Sun 25/9, 1-5 pm.

Northern and Eastern Districts OS. WINTER. St Phillip's Parish Hall, Galway Ave, Broadview. Fri 20/7, 10 am-9 pm and Sat 21/7, 10 am-9 pm. SPRING. Same venue. Thurs 6/9 to Sat 8/9, each day 10 am-9 pm. ORCHID DISPLAYS, Gillies Plains Shopping Centre, North East Rd, Gillies Plains. Thurs 27/9 to Sat 29/9 in shop hours. Parabank Shopping Centre. Fri 21/9 and Sat 22/9. Sec: Mr J. Keen, 22 Campbell St, Oaklands Park. Ph (08) 296 4476. Meets St Philip's Hall, 3rd Thurs, 8 pm.

Port Augusta O Club. SPRING. Cooinda Hall. Sat and Sun 8-9/9. Sec: M/s Betty Vile, PO Box 1762, Port Augusta 5700. Meets 4th Wed, Dept of Community Welfare, El Alamein Rd.

Port Lincoln OS. SPRING. Contact secretary, Mrs K. Castley, PO Box 1335, Port Lincoln 5606. Ph (086) 82 3417. Meets last Fri at Eyre Peninsula Community College.

Riverland Orchid Society. Sec: Mr M. Pfeiffer, PO Box 484, Loxton 5333. Ph (085) 84 1439. Meets 2nd Sun, 2 pm at Senior Citizens' Club, Loxton.

South Coast Orchid Club of SA. WINTER. "Collanades", Noarlunga Centre, Mon 30/7 to Sat 4/8, shop hours. SPRING. Same place, Mon 24/9 to Sat 29/9. Floral art feature. Plants and blooms on sale. Show sec: John Leeder, 54 Austral Tce, Malvern 5061. Meets 2nd Tues, Lutheran Church Hall, Windsong Court, Christies Downs.

SA Orchidaceous Society. WINTER. Thebarton Assembly Hall, South Rd, Torrensville. Sat 28/7, 1-6 pm. Sun 29/7,

10 am-5 pm. Part proceeds Thebarton Hospital. SPRING. Tea Tree Plaza Shopping Centre, Modbury. Mon 24/9 to Sat 29/9 in shop hours. Part proceeds Adelaide Children's Hospital. Sec: Mrs E. Shawyer, 60 Balfour St, Nailsworth 5063. Ph 44 4260. Meets 3rd Wed, Thebarton Assembly Hall, South Rd, Torrensville.

Whyalla O Club. Contact secretary for show dates. Sec: M/s S. Gault, PO Box 566, Whyalla 5600. Ph 45 4740. Meets 3rd Wed at Left Hand Club, Dick St, Whyalla.

TASMANIA

Tasmanian OS. SPRING. Town Hall, Macquarie St, Hobart. Fri 28/9, 1-9 pm. Sat 29/9, 9 am-9 pm. Sun 30/9, 9 am-5 pm. Mainlanders should plan their holidays to take in this show. Sec: J.F. Smith, 11 Warren Court, Howrah 7018. Ph (002) 44 1555. Meets 4th Mon, Legacy House, 159 Macquarie St, Hobart.

Devonport Orchid Society. SPRING. Spreyton Hall, Spreyton. Fri 5/10, Sat 6/10 and Sun 7/10. Opens 2 pm, 5/10. Visitors welcome at meetings and show. Sec: Gwen Smith, PO Box 805, Devonport 7310. Meets Lyons Library, Fenton St, Devonport 3rd Wed, except Jan, 8 pm.

Launceston Orchid Society. SPRING. Windmill Hill Memorial Hall, High St, Launceston. Fri 12/10, 2.30-8 pm. Sat 13/10, 10 am-8 pm, Sun 10 am-5 pm. Sec: Mrs Reta Stronach, 17 Birdwood St, Launceston 7250. Ph (003) 26 2632. Meets 3rd Tues, Anzac Hostel, Paterson St.

Orchid Society of North-West Tasmania. SPRING. Burnie Civic Centre. Dates from secretary, Mrs E. O'Halloran, Municipal Caravan Park, East Wynyard. Ph (004) 42 3730. Meets 2nd Mon, 7.30 pm, Hellyer College, Mooreville Rd, Burnie.

Scottsdale OS. SPRING. Scottsdale. Fri 28/9, 1-7 pm. Sat, 10 am-7 pm. Sun, 10 am-5 pm. Potting demonstration Sat. Sec: Mrs E.M. Rainbow, Nabowia 7254. Meets 3rd Thurs at Kendell's Hotel.

WESTERN AUSTRALIA

Orchid Society of WA. WINTER. Garden City Shopping Centre, 125 Risley St, Booragoon. July 11 to 14, set-up 10/7. SPRING. Same venue. Wed 26/9 to Sat 29/9, set-up 25/9. Both shows in shopping hours. Sec: Mr J. Foley, 39 Stirk Rd, Alfred Cove 6154. Ph 330 2132. Meets 4th Fri, Institute of Engineers Hall, 712 Murray St, West Perth.

Albany OS. WINTER. Venue and dates to be announced. SPRING. Ditto. Meets at 75 Seymour St, Albany, 4th Wed, 8 pm. Sec: Mr B. Newman, PO Box 13, Albany 6330. Phone (098) 41 5670.

Bunbury OS. WINTER. Bunbury Forum, Shopping Centre, Sandridge Rd. Thurs 26/7 to Sat 28/7. SPRING. Bunbury Forum. Thurs 20/9 to Sat 22/9. Both shows in shop hours. Sec: Mr P.R. Chalmers. Ph (097) 26 1045. Meets 1st Tues, Walker Memorial Hall, Bunbury.

Melville Dis OS. WINTER. Roy Edinger Hall, Stock Rd, Palmyra. Sat 21/7, 1-8 pm. Sun, 9.30 am-4.30 pm. SPRING. Same venue. Sat 1/9, 1-8 pm. Sun 2/9, 9.30 am-4.30 pm. Sec: Ian Baily, 33 Waddell Rd, Palmyra 6157. Meets Roy Edinger Hall, 2nd Thurs.

Northern Districts OS. WINTER. Mirrabooka Shopping Square. Thurs 19/7 to Sat 21/7, shop hours. SPRING. Check venue and dates with secretary, N. Risbey, PO Box 190, Osborne Park 6017. Ph 445 1677. Meets 4th Mon, Alf Faulker Hall, Eden Hill.

Wanneroo OS. SPRING. Whitford City Shopping Centre, Whitford's Ave, Hillarys. Thurs 20/9 to Sat 22/9. Shop hours. Meets Lesser Hall, Wanneroo Civic Centre, 3rd Thurs, 8 pm. Sec: Mr R. Stapleton, 11 Chrysostum St, North Beach 6020. Ph 447 6821.

WA Native Orchid Study & Conservation Group. Meets in Theatrette, Dept of Agriculture, Jarrah Rd, South Perth, 3rd Wed, 8 pm. Sec: Mr N. Hoffman, 25 Brine Rd, Kalamunda 6076. Ph 293 3058.

QUEENSLAND
BRISBANE AND VICINITY

Queensland OS. Meets 2nd Mon Metropolitan Senior Citizens' Centre, McLachlan St, Valley, GPO Box 2002, Brisbane 4001. Ph 378 7649.

Aspley OS. SPRING. Community Cenre Hall, Edinburgh Castle Rd, Wavell Heights. Sat 1/9, 9 am-6 pm. Sun 2/9, 9 am-4 pm. Meets 1st Thurs as above. Sec: Mrs J. Hall, PO Box 67, Aspley 4034. Ph 266 7438.

Brisbane OS. Sec: I.H. McCallum, PO Box 94, Stones Corner 4120.

Caboolture OS. Sec: Mrs V. Rapkins, PO Box 549, Caboolture 4510.

Craigslea OS. Sec: M. Grainies, C/-33 Ferricks St, Stafford 4053.

Darling Downs O Ass. SPRING. Eager's Showroom, Toowoomba, Sat 22/9 to 29/9 in Carnival of Flowers week Sec: Mrs S. Stone, PO Box 3216, Toowoomba 4350. Meets 3rd Thurs, Scout Hall, Ruthven St.

Eastern Districts OS. SPRING. Guardian Angels Hall, Bay Tce, Wynnum. Sat, Sun 18/9, 19/9. Sec: Mrs S. Crosby, PO Box 60, Wynnum Central 4178. Meets 4th Thurs, Guardians Hall.

Glasshouse Country OS. Sec: Mrs N. Frizzo, PO Box 21, Beerwah 4519. Ph (071) 96 9361. Meets 2nd Thurs, CWS Hall, Beerwah.

Gold Coast OS. In Owen Park Showground as part of Gold Coast Show. Enquiries to The Secretary, PO Box 323, Burleigh Heads 4220. Meets SCWD Hall, Burleigh Heads on 2nd Sun at 1.30 pm.

Gympie & Dis OS. Sec: Mrs A. Maher, PO Box, Gympie 4570.

Ipswich OS. SPRING. RSL Clubrooms, Down St, North Ipswich. For dates contact secretary. Sec: Mrs C. Ruthenberg, 28 Hunter St, Brassall 4305. Ph 201 6223.

John Oxley OS. ANNUAL SHOW. Mt Coot-tha Botanic Gardens Auditorium. Sat 28/7, 9 am-9 pm. Sun 29/7, 9 am-5 pm. Sec: Mr H. Faber, PO Box 205, Corinda 4075. Ph 379 3626. Meets 2nd Wed, Uniting Church Hall, Oxley Rd, Sherwood. Above is Brisbane's only late winter show.

Logan & Albert OS. SPRING. 21/9 to 22/9. CWA Hall, Beaudesert. Sec: N. Goeldner, PO Box 235, Beaudesert 4285.

Maryborough OS. SPRING. St Paul's Memorial Hall, Adelaide St. Fri 14/9, 8 am-9 pm. Sat, 8 am-5 pm. High standard show. Sec: Mrs V. Brigg, PO Box 389, Maryborough 4650. Ph (107) 21 4363. Meets 2nd Tues, TPI Hall, Sussex St.

Maroochydore OS. Sec: Mrs Z. Rogers. Ph (071) 43 2045. Meets 1st Tues, Lutheran Hall, Henkley Pde, Maroochydore.

Mt Coot-tha Day OS. No public shows. Sec: Mrs D. Den Haan, PO Box 32, Paddington 4964. Meets 1st Tues at 10 am in Mt Coot-tha Gardens Auditorium.

Native OS of Queensland. Sec: Mrs J. Crane, PO Box 159, Broadway 4000. Ph 378 2881. Meets 1st Mon, Bread House, 49 Gregory Tce, Brisbane, 8 pm.

North Albert OS. SPRING. Orchid Spectacular, Oldmac Toyota Showroom, 3376 Pacific Hwy, Springwood. Sat 25/8, 9 am-6 pm. Sun 26/8, 9 am-5 pm. Open show, competitors from all societies welcome. Sec: N. Williams, PO Box 411, Woodridge 4114. Ph 200 6128. Meets 3rd Tues at Woodridge State High School, Wembley Rd, Woodridge.

North Brisbane OS. Meets St Peters C of E Hall, Toombul Rd, Northgate, 4th Thurs at 8 pm. Also 2nd Tues, Culture meeting 9.30 am for shift-workers. For confirmation of meetings and show dates contact secretary, Mrs V. Scales, PO Box 325, Nundah 4012.

North Coast OS, Nambour. SPRING. Civic Hall, Nambour, Thurs 6/9 to Sat 8/9. Meetings 4th Mon, Band Hall, Daniel St, Nambour at 8 pm. Sec: Mrs D. Mitchell, PO Box 140, Nambour 4560. Ph (071) 45 7334.

Orchid Species Society. SPRING. New Botanic Gardens Auditorium, Mt Coot-tha. Sat 15/9, 8 am-5 pm. Sun, 9 am-5 pm. Show Sec: Mrs B.A. Young, PO Box 485, Toowong 4066. Ph 369 1328 or 371 9241. Meets 3rd Mon, Mt Coot-tha Gardens Auditorium.

Pine River OS. SPRING. Kensington Village Shopping Centre, Strathpine. Thurs 27/10 to Sat 29/10. Society and commercial displays plus sales stall. NORTHSIDE CHARITY ORCHID SPECTACULAR. Open to all Northside societies. Zupps Motors Showrooms, 1442 Gympie Rd, Aspley. Fri 13/7, noon-9 pm, Sat, 9 am-9 pm. Sun, 9 am-3 pm. Sec: M/s D. Marques, PO Box 229, Strathpine 4500.

Redcliffe OS. SPRING. Kipparing Village Plaza. Thurs 6/9 to Sat 8/9, 9 am-5 pm each day. Sec: Mrs Joyce Smith, PO Box 51, Margate Beach 4019. Ph 269 4728. Meets 2nd Wed at Clontarf CWA Hall,

cnr Georgina and Victoria Aves, 8 pm. Visitors welcome.

Redlands OS. SPRING. CWA Hall, off Shore St, Cleveland. Fri 21/9 to Sun 23/9. Open 10 am Fri, 9 am Sat and Sun. Competitive classes open to members only. Sec: Mrs D. Skiggs, PO Box 116, Cleveland 4163.

Southport OS. SPRING. West Burleigh Shopping Centre. Thurs 18/10 to Sat 20/10. Shop hours. Sec: Mrs Hobson, PO Box 5336, Gold Coast Main Centre, Bundall 4217. Meets 1st Wed in Gold Coast Womens Association Hall behind library in Lawson St, Southport.

Sunshine Coast OS. SPRING. Caloundra. For details contact Miss A. Hall, PO Box 279, Caloundra 4551.

Toowoomba OS. SPRING. Myer Roof-top during Carnival of Flowers, Sat 22/9 to Sat 29/9. Shop hours except Sun, 10 am-5 pm. A wonderful week to visit. Sec: F. Simpson, PO Box 885, Toowoomba. Qld 4350. Ph 35 1948. Meets 4th Fri except Sept and Dec, St James Hall, Russell St.

Warwick OS. Sec: N.D. Cook, 39 Myall Ave, Warwick 4370.

West Brisbane OS. Sec: Mrs R. Ozanne, 105 Bowman Pde, Bardon 4065.

West Moreton O Group. For show details contact secretary, Mr T. Freiberg, PO Box 101, Ipswich 4305. Ph (pres) (07) 288 8761. Meets W.G. Hayden Humanities Building, cnr Nicholas and South Sts, Ipswich.

Wynnum Manly Dis OS. SPRING. RSL Hall, 184 Melville Tce, Manly. Sat 29/9, 8.30 am-9 pm. Sun 30/9, 8.30 am-4.30 pm. Sec: Mrs E. Biggall, PO Box 91, Manly 4179. Ph 396 0128. Meets 3rd Wed, above address, at 7.30 pm. Day meeting 3rd Mon at 9.30 am.

NORTH QUEENSLAND

Atherton Tableland OS. WINTER. At Atherton Agricultural Show in Merriland Hall. Possibly 9/7 and 10/7. Check with secretary. SPRING. "Fun in the Sun" Combined Society Show at Table Tennis Centre, Cairns, possibly 6/10 and 7/10. Check with secretary. This show by four societies is highly recommended to visitors from south. Sec: Mr J.J. Mackin, PO Box 427, Atherton 4883. Meets 1st Thurs of month except Dec and Jan at CWA Hall, Jack St, Atherton.

Ayr and Dis OS. Sec: Mrs E.J. Dwyer, PO Box 412, Ayr 4807.

Blackwater & Dis OS. Show closing "Coal Capital Week", late Spring. No date yet. Sec: Mrs L. Weaver, 11 Bottletree St, Blackwater 4728. Meets Blackwater High School, 1st Wed except Jan.

Bowen OS. Sec: Mrs P. Tracy, PO Box 726, Bowen 4805.

Bundaberg OS. Sec: Mr A. Bennett, P Box 1173, Bundaberg 4670.

Capricorn Orchid & Foliage Club. ANNUAL SHOW. Lawrence Motors Showroom, North Rockhampton. Fri 24/8, noon-9.30 pm, Sat 25/8, 9.30 am-9.30 pm. Sun 26/8, 9.30 am-noon. Sec: Mr P. Jacobs, PO Box 697, Rockhampton 4700. Ph AH (072) 28 2820. Meets 2nd Fri except Jan at Orange Grove Hall, Alexandra St, North Rockhampton.

Clermont O & GS. PO Box, Clermont 4721.

Emerald O & F Society. SPRING. Contact secretary, Mrs V. Coombes, 32 Esmond St, Emerald 4720. Ph 82 1084. Meets 2nd Thurs except June, July, Aug when meetings 1.30 pm Sat. Venue St Luke's Parish Centre, Riley St, Emerald. Holds Easter Show as part of Sunflower Festival.

Gladstone OS. Sec: Mrs N. Merritt, PO Box 867, Gladstone 4680. Meets 1st Wed 7.30 pm, Gladstone Bowls Club Hall, Ferris St.

Innisfail OS. Sec: A. Matthews, PO Box 475, Innisfail 4860.

Mackay OS. SPRING. Centrepoint, Mackay. For dates contact secretary. Wide range of genera. Sec: Mrs E. Baldock, PO Box 776, Mackay 4740. Ph 42 2282. Pres: Mrs M. Purnell, ph 42 1546. Meets 3rd Thurs at Christian Bros College Rec Hall.

Mareeba O & PPS. UNITING CHURCH O & F SHOW, Shire Hall, 11/8. Sec: Mrs J. Lawrence, PO Box 504, Mareeba 4880. Meets 2nd Tues at Presbyterian Hall, Walsh St, 8 pm. Visitors welcome. Fellow growers taken to collections.

North Queensland OS. Sec: A.S. Smith, PO Box 1024, Cairns 4870. Ph 55 1246. Meets 2nd Mon, Education Centre, Morehead St, Bungalow. No details advised. See under Atherton "Fun in the Sun" Show.

Mt Isa OS. No show. Meets last Fri at 8 pm. Playgroup Centre, Daphne St, Mt Isa. Sec: Mrs L. Sanderson, PO Box 702, Mt Isa 4825.

Proserpine OS. Show details from Mrs D. Lucas, PO Box 55, Proserpine 4800.

Rockhampton OS. SPRING. St Paul's Cathedral Hall, William St. Fri 21/9, Sat 22/9 and Sun 23/9. Fine vandaceous and cattleyas. Sec: Brian Maxwell, PO Box 5949, Rockhampton Mail Centre, Rockhampton 4702. Ph 28 2278. Meets 4th Tues, North Rockhampton Uniting Church Hall, Musgrave St, 8 pm.

South Burnett OS. Sec: L.G. Hunt, 8 Farr St, Kingaroy 4610.

Townsville Orchid & Allied Plants Ass. PLANT DISPLAY. Nathan Plaza. October dates to be confirmed. Sec: Mr L. Lyon, PO Box 663, Hermit Park 4812. Ph 79 3051. Meets 3rd Tues, OES Hall, Ingham Rd, Townsville.

Tully & Dis OS. Sec: Mrs E. Gourley, PO Box 648, Tully 4854.

NSW SYDNEY AREA

Orchid Society of NSW. WINTER. Ashfield Mall. Whole week commencing Mon 18/6 in shop hours. SPRING. Roselands Shopping Centre, Mon 17/9 to 22/9, shop hours. One of the world's great orchid shows. Marshal: Mr I. Chalmers, 25 Turriell Pt Rd, Caringbah 2229. Ph 525 7215. Meets last Mon at Henley Bowling Club, Crown St, Henley, 8 pm. Sec: Miss B. Oldfield, 61 Mountford Ave, Guildford 2161.

Australasian Native OS. SPRING. Warringah Group, Mona Vale Mem Hall, Pittwater Rd, Mona Vale. Sat 18/9, 9 am to 9 pm. Sun, 10 am to 4 pm. Set up noon to 10 pm, Fri 7. The largest native show in Australia. Species and hybrids for sale. Admission 50¢. Children and pensioners free. Show marshal: C. Arnott, ph 98 9173. Show Sec: R. Lowe, ph 44 3993. Meets 2nd Thurs at Thomas Vickers Mem Hall, Pitt and Grainger Sts, Curl Curl. All welcome.

Bankstown OS. WINTER. Scottish Hall, Weigand Ave, Bankstown. Mon 2/7 at 8 pm. ORCHID SPECTACULAR. Bass Hill Shopping Plaza, Hume Highway. Mon 3/9 to Sat 8/9. Shop hours. SPRING. Scottish Hall, Mon 1/10 at 8 pm. Meets 1st Mon of month at Scottish Hall, Bankstown. Sec: Mr K. Healey, 78 Alma Rd, Padstow Heights 2211. Ph 77 9370.

Berowra OS. SILVER ANNIVERSARY SPRING SHOW. Community Centre, Gully St, Berowra. Fri 7/9, noon-9 pm. Sat 18/9, 9 am-9 pm. Margaret Barnett, 7 Cullenya Close, Berowra 2081. Ph 456 1764. Meets 3rd Thurs, Berowra Community Centre.

Blue Mountains OS. WESTERN REGION SPRING SHOW. Contact Secretary. Meets 4th Fri of month, Melrose Hall, Great Western Hwy, Emu Plains. Sec: Ralf Terbutt, 33 Joanna St, South Penrith 2750. Ph (047) 36 2230.

Cumberland O Circle. WINTER. Bethlehem Uniting Church, 7 Castle Hill Rd, West Pennant Hills, 10 am to 4 pm, Sat 28/7. SPRING. Castle Towers Shopping Centre, Old Northern Rd, Castle Hill. Wed 5/9 to Sat 8/9 in shop hours. Sec: Mrs E. Lyttle, 25 Bishop Ave, West Pennant Hills 2120. Ph 84 4611. Meets Bethlehem Uniting Church, 7 Castle Hill Rd, 4th Wed.

Eastern Suburbs OS. WINTER. St Luke's Church Hall, Arden and Varna Sts, Waverley, 8-10 pm, 18/6. SPRING. Same place. 8-10 pm, 10/9. Meets 3rd Mon, St Luke's. Sec: S. Condon, 7 Langlands Rd, Annangrove 2154. Ph 679 1482.

Eastwood O Circle. SPRING. Masonic Hall, Rowe St, Eastwood. Mon 10/9, 1.30-10 pm, 11-12/9, 10 am-10 pm, 13/9, 10 am-9.30 pm. Sec: Mrs G. Spinner, 30 Providence Rd, Ryde 2112. Ph 807 6727. Meets 1st Wed, Uniting Church Hall, Acacia St, Denistone East.

Five Dock RSL OS. WINTER. Five Dock RSL Club Auditorium, 66 Great North Rd, Five Dock. Wed 25/7, 8-10.30 pm. Wed 22/7, 8-10.30 pm. Class for visitors. SPRING. Auditorium Birkenhead Shopping Centre, Thurs 27/9, 2-9 pm, 30/9 9.30-6 to Mon 1/10. Set up Wed 26/9, noon-9 pm. Mrs K. Jones, Warreemba St, Five Dock. Ph 713 8124. Big range of open classes. Meets 4th Wed, Five Dock RSL Club.

Hawkesbury District OS. SPRING. Richmond Neighbourhood Centre, West

Market St. Sat 1/9, noon-7 pm. Sun 2/9, 9 am-5 pm. Meets 2nd Tuesday, Richmond Neighbourhood Centre, 8 pm. Sec: Mrs M. Clifford, 30 Dorothy St, Freemans Reach 2756. Ph (043) 76 6194.

Ku-ring-gai OS. SPRING. Westfield Plaza, Hornsby. Thurs 30/8 to Sat 1/9, shop hours. Sec: R.H. Hood, 343 Somerville Rd, Hornsby Heights 2077. Ph 476 2908. Meets usually 3rd Mon at Pymble Community Hall, 1035 Pacific Hwy.

Lidcombe Hospital OS. 20th SPRING FESTIVAL. Upper Recreation Hall, Lidcombe Hospital, Joseph St, Lidcombe. Fri 7/9, noon-5.30 pm. Sat 8/9, 9 am-3.30 pm. BANKSTOWN SHOPPING SQUARE ORCHID SHOW. "Garden Court". Mon 10/9 to Sat 15/9, shop hours. Sec: T. Murphy, 6 Baroona Place, Seven Hills North 2147. Ph 624 1493. Meets 2nd Wed, Lower Recreation Hall, Lidcombe Hospital.

Manly-Warringah OS. SPRING. Memorial Hall, Pittwater Rd, Mona Vale. Fri 31/8, 1-8 pm, 1/9, 8 am-8 pm, 2/9, 9 am-4 pm. Sec: M.R. Barrack, 21 Wilson St, Harbord 2096. Ph 93 2753. Meets 4th Thurs Cromer Community Centre, Fisher Rd North, Cromer.

North Shore OS. WINTER. Neutral Bay Shopping Village. Rangers Rd, Neutral Bay. Wed 11/7 to 14/7. Shop hours. SPRING. Forestway Shopping Centre, Frenchs Forest. Wed 12/9 to Sat 15/9. Shop hours. Many unusual plants. Sec: Mrs L. Bromley, 43 Ferguson St, Forestville 2081. Ph 452 3202. Meets 1st Wed Dougherty Hall, 5 Victor St, Chatswood (near station).

Panania-East Hills (RSL) OS. WINTER. Junior Rugby League Hall, Smith Park, East Hills. Wed 4/7, 7.30-9.30 pm. SPRING. Panania Senior Citizens' Centre, Anderson Ave. Sat 22/9, 11 am-5.30 pm. Sec: Mr A. Ravenscroft, 5 Penrose Ave, East Hills. Ph 774 2287. Meets 1st Tues except Dec and Jan, Panania-East Hills RSL Club, 28 Childs St at 7.30 pm.

Parramatta OS. WINTER. Wentworthville Community Centre Hall, Darcy Rd, Tues 24/7, 8 pm. SPRING. Parramatta Westfield Shoppingtown. Mon to Sat 20-25/8 in shop hours. G.S. Banks, 183 Windsor Rd, Northmead 2152. Ph (02) 639 4815. Meets 4th Tues, Wentworthville Community Centre Hall.

Southern Districts
GREAT COMBINED SHOW

Westfield Shoppingtown, Hurstville
Monday, August 13 to Saturday, August 18. Set up August 12.
In shopping hours.
Sec: Mr Ron Edwards,
114 Coonong Rd, Gymea Bay 2227.
Phone 525 9623.
Combined Societies: St George OS, Sydney OS and Cymbidium Club of Australia.

St George OS. WINTER. Uniting Church Hall, Bay St, Rockdale. Tues 3/7, 8 pm. Visitors table. SPRING. As above address, 4/9, 7.45 pm. All welcome, bring your plants. Sec: Mrs Jean Slattery, 12 Eddystone Rd, Bexley 2207. Ph 50 7985. Meets 1st Tues, Uniting Church Hall, Rockdale.

Sutherland Shire OS. WINTER. Gymea Bowling Club, 699 The Kingsway, Gymea. Sat 7/7, 10 am-6 pm. Sun 8/7, 9 am-5 pm. SPRING. Same place, Sat 29/9, 11 am-6 pm. Sun 30/9, 9 am-6 pm. Mon 1/10, 9 am-6.30 pm. Mrs G. Withers, 19 Davey Ave, Jannali 2226. Ph 528 9045. Meets 2nd Mon, Gymea Bowling Club.

Sydney Orchid Society. WINTER. Remembrance Hall, 220 Lakemba St, Lakemba. Thurs 14/6, 8 pm. SPRING. Above address, 13/9, 8 pm. Mrs Betty Clare, 75 Quigg St, Lakemba 2195. Ph 759 6616. Meets 2nd Thurs above address.

Western Suburbs OS. SPRING. Woodstock Community Centre, Church St, Burwood. Tues 11/9, 8 pm. Sec: L. Gleeson, 87 Stoddart St, Lakemba 2195. Ph 759 5948. Meets 2nd Tues, above address.

NEWCASTLE AND CENTRAL COAST

Newcastle District Combined Societies. WINTER. Garden City, Kotara. Benching 10/7 (Tues) then in shop hours till Sat 14/7. SPRING. Same venue. Dates to be announced. Sec: Mrs M. Parlour, PO Box 301, Mayfield. Ph (049) 43 7768. Combined Societies Committee meets 1st Mon every 2nd month at Teralba Community Hall.

Newcastle OS. SPRING. St Andrews Hall, Church St, Mayfield, Thurs 6/9, 1-6 pm. Fri, 10 am-6 pm. Sat, 10 am-6 pm. Sec: Mrs J. Blackwell, 114 Springfield Ave, Kotara 2288. Ph (049) 57 2992. Meets 3rd Wed, Scouts Hall, Station St, Waratah.

ANOS Central Coast Group. SPRING. Imperial Centre, Gosford. Set up Thurs 30/8. Fri 31/8 and Sat 1/9. Sec: Mrs B.D. Johnston, 158 Geoffrey Rd, Chittaway Point 2259. Ph (043) 88 1785. Meets 2nd Wed, Baptist Church Hall, York and Frederick Sts, East Gosford.

ANOS Newcastle Group. SPRING. Non-competitive display in conjunction with SGAP at College of Advanced Education, Shortland. Sat 22/9 and Sun 23/9. Enquiries to Mrs S. Herd, 4 Pemell St, Toronto 2283. Ph (049) 59 2734. Meets 4th Wed except Dec at John Young Community Centre, Thomas St, Cardiff.

Boolaroo OS. SPRING. Jesmond Cenre, Blue Gum Rd, Jesmond. Thurs 20/9 to Sat 22/9. Shop hours. Meets Teralba Community Hall, 1st Wed in month. Sec: Mrs J. Partridge, 22 Alexander Pde, Charlestown 2290. Ph (049) 43 2043.

Gosford & District OS. WINTER. Mon 9/7 to Sat 14/7. Shop hours in Marketown, Gosford. SPRING. Mon 10/9 to Sat 15/9. Shop hours in Marketown. Always a bright show. Sec: Mrs V. Peck, PO Box 541, Gosford 2250. Ph (043) 28 1485. Meets 4th Wed, Baptist Church Hall, York and Frederick Sts.

Gloucester & Dis OS. SPRING. Gloucester Bowling Club. Sat 22/9, 9.30 am-9.30 pm. Sec: Mrs T. Littlewood, 42 Philip St, Gloucester. Ph (065) 58 1950. Meets 2nd Thurs, 15 Queen St, Gloucester.

Great Lakes OS. No shows this year. Sec: Mrs J. Kilpatrick, 19 Helen St, Forster 2428. Ph (063) 54 9073. Meets 2nd Tues. Forster Primary School, Middle St, Forster.

Hastings River OS. WINTER. Combined show with Manning River OS. For details contact respective secretaries. SPRING. CWA Hall, High St, Wauchope. Fri 21/9, noon-9 pm. Sat 22/9, 9 am-9 pm. Sec: Mrs D. Griffiths, PO Box 193, Wauchope 2446. Ph Sec: (065) 83 5470, Pres: 85 3311. Meets 2nd Fri at Uniting Church, Hastings St, Wauchope.

Maitland & Coalfields OS. SPRING. Sharton Motors, High St, Maitland (opp Town Hall). Thurs 13/9 to 15/9, 9 am-9 pm daily. Good natives. Sec: Mr E. Hunt, Windermere Rd, Lochinvar 2321. Ph (042) 30 7300. Meets 2nd Thurs except Jan, Literary Institute, Banks St, East Maitland.

Manning River OS. WINTER. Combined show with Hastings River OS, for details contact respective secretaries. SPRING. Taree High School Hall, Macquarie St. Thurs 6/9, 9 am-9.30 pm. Fri 7/9, 9 am-6 pm. Sec: Mr Bob Zeller, PO Box 797, Taree 2430. Meets 1st Fri at Protestant Hall, Macquarie St, Taree.

Morisset OS. WINTER. Wyong Plaza. Thurs 26/7 to Sat 28/7. Shop hours. Set up 25/7, 5.30-7.30 pm. SPRING. Charlestown Square Shopping Centre, benching 21/8, Wed 22/8 to Sat 25/8. Sec: Mr B. Jacob, Lot 8 Warnervale Rd, Warnervale 2259. Ph (043) 92 2702. Meets Charmhaven Community Hall, 2nd Tues.

Port Macquarie OS. SPRING. Civic Centre, Cnr Clarence and Hay Sts. Thurs 13/9, 10 am-8 pm, 14/9 and 15/9, 10 am-5.30 pm, Sat 15/9, 10 am-3 pm. Sec: Mrs P. Jagger, PO Box 928, Port Macquarie 2444. Ph 65 6354. Meets Hastings Lodge, cnr Grant and Burrawan Sts on 4th Fri.

Tamworth OS. SPRING. K-Mart Plaza, Peel St. Fri 21/9, 11 am-5 pm. Sat 22/9, 9 am-11.30 am. Mrs M. Drewe, 13 Cohen St, Tamworth 2340. Ph (067) 66 3316. Meets 3rd Wed, Centre for Continuing Education, 81 Brisbane St.

Far North Coast Orchid Council. WINTER. Lismore Square. Thurs 5/7 to Sat 7/7, shop hours. The Council is the co-ordinating body for all Far North Coast societies. Sec: Mrs C. Saunders, 6 Winston St, Casino 2470. Ph (066) 62 3509.

NSW NORTH COAST

Alstonville OS. SPRING. Catholic Hall, Main St, Alstonville, Sat 1/9, 9 am-6 pm. Sec: Mr C.G. Howie, PO Box 51, Alstonville 2477. Ph (066) 28 0601. Meets 2nd Wed, Anglican Church Hall.

Ballina OS. SPRING. Ballina Shopping Centre. For dates contact secretary.

Mr D. Lynch, 6 Rainbow Ave, Ballina. Ph (066) 86 3027. Meets 1st Sat afternoon, Community Health Centre, Cherry St at 2 pm.

Byron Dis OS. 27th SPRING. Fellowship Centre, Dalley St, Mullumbimby. Fri 14/9 and Sat 15/9. Sec: Mrs E. King, PO Box 258, Mullumbimby 2482. Phone enquiries to Mr P. Sheaffe, 85 1387. Meetings rotate UC Hall, Mullumbimby; CWA Hall, Byron Bay; RSL Hall, Bangalow, 2nd Mon night of month.

Casino OS. SPRING. RSL Hall, Canterbury St. Fri 28/9, 12.30 pm-9 pm. 29/9, 9 am-5 pm. Sec: Mrs N. Anderson, PO Box 303, Casino 2470. Meets 4th Fri, Old Bowling Club House, Convent Pde (except Dec).

City of Lismore OS. SPRING. Lismore City Hall. Mon 3/9 and Tues 4/9, 9 am-9 pm, Wed 5/9, 9 am-8 pm. Set up Sun 2/9. Sec: W. Parkinson, 9 Spring Ave, Goonellabah 2480. Ph (066) 24 1468. Meets 3rd Tues, Red Cross Rooms, Keen St, Lismore.

Coffs Harbour OS. SPRING. Civic Centre Supper Room, Gordon St. Fri, Sat 14-15/9, 9 am-8 pm. Sun 16/9, 9 am-2 pm. Open show, set up Thurs night. Fine, well-displayed orchids. Mr S. Clemesha, Lot 6 Skinner Place, Avocado Heights, Woolgoolga 2456. Ph 53 6151. Meets 1st Thurs, Cavanbah Hall, High St.

Evans Head OS. SPRING. Memorial Hall, Pacific Hwy, Woodburn. Sat 15/9, 8 am-4 pm. Sun 16/9, 8 am-4 pm. Sec: Mrs B. Rose, 16 Cedar St, Evans Head 2473. PH (066) 82 4707.

Grafton OS. SPRING. Thurs 20/9 to Sun 23/9. N. Skennar, PO Box 351, Grafton 2460. Ph (066) 42 3813. Meets 3rd Wed except Sept and Jan in Senior Citizens' Hall.

Hastings River OS. SPRING. No details. Mrs M. Graham, PO Box 193, Wauchope 2446. Ph (065) 83 1552. Meets 2nd Fri, Hastings St, Uniting Church Hall.

Tweed District OS. SPRING. RSL Hall, Kingscliff St. Sat 22/9, 9 am-7 pm. Sun 9 am-4 pm. Sec: D. Capner, Kiel Vale Via Murwillumbah 2484. Ph 72 1375. Meets 3rd Thurs, CWA Rooms, Queen St, Murwillumbah.

NSW — SOUTH AND WEST

Campbelltown OS. WINTER. McArthur Square Shopping Centre. Thurs 19/7 to Sat 21/7. High class. SPRING. Same venue. Thurs 20/9 to 22/9. Splendid natives. Sec: Mr E. Fish, 10 Yarrangobilly St, Heckenberg 2168. Ph 608 1672. Meets 2nd Tues, Beverly Park School.

Corrimal OS. WINTER. Danes Car World, Princes Hwy, Bulli. Wed 11/7 to Fri 13/7, all 9 am-10 pm. SPRING. Same venue Thurs 6/9 to Sun 9/9, all 9 am-10 pm. Sec: Mrs P. Seabrook, 7 Spofforth St, Warilla 2528. Ph (042) 96 7228. Meets 2nd Wed, Masonic Hall, Railway St, Corrimal.

Griffith OS. SPRING. Wade High School Hall. Sat 29/9, Sun 30/9, both 10 am-5 pm. Sec: Mrs V. Beattie, PO Box 1944, Griffith 2680. Ph (069) 62 5371. Meets 1st Mon, St Albans Hall, Griffith.

Illawarra OS. WINTER. Warrawong Shopping Centre. Thurs 26/7 to Sat 28/7 in shop hours. Good early orchids. SPRING. Same venue. Thurs 30/8 to Sat 1/9. Shop hours. Fine show. Sec: Mr T. Bradford, 9 Edgeworth Ave, Kanahooka 2530. Ph (042) 61 2260.

Shoalhaven OS. WINTER. St Andrew's Presbyterian Church Hall, Kinghorn St, Nowra. Thurs 19/7, 9 am-8 pm. SPRING. Above address 21/9, noon-9 pm, 22/9, 9 am-6 pm. Sec: Mr S. Crowther, 4 Amber Place, Bomaderry 2541. Ph (044) 21 2449. Worthy show. Meets 1st Mon, St Andrew's Pres Hall.

South Coast OS. WINTER. Westfield Shoppingtown, Figtree. Thurs 19/7 to Sat 21/7. Shop hours. SPRING. Same venue. Thurs 20/9 to 22/9. Shop hours. Sec: Mrs Y. Williams, 39 Outlook Drive, Figtree 2525. Ph (042) 28 4947. Meets 1st Mon, Uniting Church Hall, Russell St, Corrimal.

Southern Riviera OS. SPRING. Civic Centre, Ulladulla. Sat 29/9, 10 am-6 pm. Sun 30/9, 10-4. Mrs M. Carter, PO Box 124, Milton 2538. Ph (144) 55 2196. Meets 1st Fri, Kendall Cottage, Ulladulla.

Wollongong & Dis Native OS. SPRING. No details. Sec: Mrs D.E. Gillis, 42 O'Briens Rd, Fig Tree, NSW 2525. Phone (042) 28 4898. Meets 2nd Tues in Meeting Room, Wollongong Town Hall.

Orchid Society of the NT. GARDEN FAIR. Meets 1st Mon in members' gardens. Sec: Mrs M. Woldmann, PO Box 38493, Winnellie, NT 5789. Ph 85 1923, AGM 3/5/82.

Nightcliff OS. Sec: Mrs M. Cailler, PO Box 41165, Casuarina, Darwin 5794.

SECRETARIES PLEASE ADVISE 1985 SHOW DATES INCLUDING AUTUMN AS SOON AS POSSIBLE.

The late Mr Eric Young

Mr Eric Young in his lifetime became a legend in the world of orchids.

Since boyhood orchids fascinated him. In maturity some might regard the immense drive and effort he put in to growing, breeding, studying and promoting them, to be an obsession. If so it was a splendid obsession of benefit to everyone who grows orchids.

His first carefully-acquired collection was lost during the war years while he was in the services.

After the war he built up a chain of jewellery stores. This gave him the income to further his visions. At his home on the island of Jersey he built up an amazing orchid collection. In his lifetime he received over a hundred RHS Awards, many with plants of his own hybridising.

For the 22 years up to his death he was a member of the RHS Orchid Committee. He founded the British Orchid Council in 1975 and has been its only president. He was a committee member of the European Orchid Council. For the last seven years he was World Orchid Conference Committee chairman and a member of the Research Committee. As conference chairman he travelled on ten occasions to Thailand prior to the Ninth World Conference and twice to South Africa for the Tenth Orchid Conference. He was meticulous in attending all meetings of the RHS Orchid Committee and American Orchid Society Committee. The AOS made him an honorary judge.

All his many trips on orchid business were at his own expense. Nor did he handle his orchid collection as a business. Plants only left it as gifts.

Among the many substantial monetary contributions for scientific orchid research in England and America was his endowment of a three-year scholarship for promising young orchid growers. This involved two years training at Wisley RHS Gardens and a year's travel to orchid centres.

Mr Young's largesse was not confined to orchids. In particular, institutions on Jersey felt his influence. As a member of the Jersey Wildlife Trust he helped finance the zoo. He donated a building as a meeting place for Jersey senior citizens. Building of the Jersey Cheshire Home for the Disadvantaged was made possible by his gift of land and £600,000.

Some years ago Eric Young made plans to ensure the perpetual maintenance of his orchid collection and library, and to ensure that orchid research would continue. For these purposes he established the Eric Young Foundation, and took steps to establish his Jersey property, Mont Millais, as an orchid research centre.

The legend of Eric Young will continue to grow in a very practical way.

Cymbidium Orchids

FROM $6 — 12 to 20 cm LEAF LENGTH.

OVER 120 TOP-LINE BEAUTIFUL EXPORT QUALITY FLOWERS IN A WIDE RANGE OF LOVELY COLOURS.

These mericlones are the latest showbench varieties. A sampling of orchids available is as follows (for complete list send SAE):

STANDARD CYMBIDIUMS

AMY STUART 'ZITA' — Beautiful, large white August flower ..... plants $6
ARCADIAN SUNRISE 'GOLDEN FLEECE' 4N — Bold yellow, June bloom ..... plants $8
DOREEN DARWEN 'MISS AMANDA' — Showbench white — great form ..... plants $6
FIREWHEEL DELLWOOD — Outstanding burgundy bloom, thick-spotted lip ..... plants $6
GUADALJARA SIESTA — Show and export, lovely orange-yellow, September ..... plants $6
GURANA 'HAZEL' — Very good pink, good shape, one of the best ..... plants $8
HIGHLAND MIST 'CAROLINE' — TOP CLASS, September apple-green ..... plants $7
HIGHLAND MIST 'JAYNE' — Beautiful show winner — September green ..... plants $8
JOYCE DUNCAN 'EMERALD' — Very good-shaped green flower, bold red lip ..... plants $8
LISA ROSE 'FIREGLOW' — Good early pink — upright stem ..... plants $6
MALANA 'CAROLINE HARGREAVES' — Awarded top production, September yellow ..... plants $6
PHARAOH 'ALMIGHTY' — Lovely white show flower — upright spike ..... plants $8
RIEVAUL x COOKSBRIDGE — Beautiful, striking, dark pink flower ..... plants $6
SIRIUS AMINYA x LUNAGRAD ELANORA — Green July export — with red lip ..... plants $8
SENSATION 'MELITA' — Fantastic red September flower ..... plants $6
SLEEPING BEAUTY 'COLOSSUS' 4N — Beautiful white August bloom ..... plants $8
SUSAN HUGHES 'JUDITH' — Champion light-green flower ..... plants $6
WOLLARA 'GOLDEN BALL' — Intense yellow September bloom ..... plants $6
ZUMA BOYD 'MELVA' (EVERGLADES) — Pale green bloom — red-spotted lip ..... plants $8

MINIATURE AND INTERMEDIATE CYMBIDIUMS

AGNES NORTON 'SHOWOFF' — Shapely brown-green bloom ..... plants $6
CAMELARD 'ANGEL' — White merging into green bloom — delightful ..... plants $6
CAMELARD Z60 — Beautiful green bloom with yellow lip ..... plants $6
CELTIC IMP 'CAPRICE' — July green, good shape, huge spotted lip ..... plants $6
DAG 'GREEN JEWEL' — Green June/July bloom, yellow lip, prolific ..... plants $6
EIKOH (Japanese) — Lovely burgundy, July bloom — upright spike ..... plants $8
EXCALIBAR 'GALAHAD' — Lovely, sandy, pink blooms on upright spike ..... plants $6
KENNY 'WINE COLOUR' — 20-30 wine-coloured blooms on upright spike ..... plants $8
LYNETTE 'DORSET' — Beautiful brownish-pink blooms on upright spike ..... plants $6
MIMI 'LUCIFER' — Brilliant, deep-red flower — a favourite ..... plants $6
MIMI MARY BEA x CARISONA GLENDESSARY 'KAREN' — Red, darker red lip ..... plants $6
MORIALTA FALLS — 18-20 beautiful green blooms on spike ..... plants $6
NONNA 'GOLDILOCKS' — Lovely yellow-green bloom with yellow lip ..... plants $6
OLYMILUM 'SWEETHEART' — Delightful, good-shaped white flower ..... plants $6
ORKNEY 'PINK HEATHER' — Well-shaped deep pink, July flower ..... plants $8
ORIENTAL LEGEND 'CINNAMON' — 20-25 blooms on upright spike ..... plants $6
ORIENTAL LEGEND 'LAVENDER LACE' — Burgundy bloom, lavender lip ..... plants $6
ORIENTAL LEGEND 'WILD ROSE' — Good-shaped, dark pink blooms ..... plants $6
PELLEAS MORGANOR — Good-shaped flowers on upright spike ..... plants $8
PENDRAGON 'GOLDEN SCAMP' — Delightful yellow bloom ..... plants $8
SARAH JEAN 'WONDABAH' — Light green bloom, suffused-pink lip ..... plants $6
SHOWGIRL 'JULIE CHRISTIE' — Lovely white bloom, red-spotted lip ..... plants $6
STARBRIGHT 'CAPELLA' — Pink blooms on erect spike — vigorous July-September ..... plants $6
SWEETHEART — Very good-shaped white, flush-pink blooms ..... plants $6
SWEETHEART (Japanese) — Creamy-yellow blooms on upright spike ..... plants $8
TOM THUMB 'CALLIOPE' — Lovely yellow-green bloom, outstanding broad lip ..... plants $6
WALU 'DIAMOND GREEN' — Beautiful green flower with red lip ..... plants $8

FLASKS: Full 25-30 plants $50 — Half 12-15 plants $28. For full list of plants and flasks available please send SAE. These healthy mericlones are forwarded bare-rooted by air, rail or express mail. CASH WITH ORDER. PACKAGING AND DELIVERY — AIR MAIL add $9.70 all States in Australia (NSW ordinary mail $4). When Air Freight required (send address and phone number). Freight to be paid on delivery — add $2 handling charge.

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SEEDLINGS — 50 mm POTS — healthy Nursery progeny: *Aeranthes* arachnites: *Aerides* crispum, krabiense, lawrenceae: *Ansellia* africana: *Catasetum* fimbriatum: *Cattleya* eldorado, leopoldii, labiata, luteola, porphryoglossa, schofieldiana, walkeriana: *Chysis* bractescens: *Cycnoches* ventricosum: *Dendrobium* albosanguineum, bracteosum, friedricksianum, gouldii, miyakei, palpaebrae, topaziacum: *Epidendrum* atropurpureum: *Gongora* quinquenervis: *Grammangis* stapelliflora, *Grammatophyllum* measuresianum: *Laelia* acuminata, gloedeniana: *Oeoniella* polystachys: *Oncidium* carthagenense, floribundum, papillio, sprucei: *Phalaenopsis* mannii, schilleriana: *Renanthera* monochica, pulchella: *Schomburgkia* crispa, thompsoniana.

FLOWERING SIZE: Growing established plants of Aerides, Angraecum, Ascocentrum, Bulbophyllum, Calanthe, Cattleya, Coelogyne, Dendrobium, Epigenium, Doritis, Gastrochilus, Laelia, Liparis, Paphiopedilum, Phalaenopsis, Rhyncostylis, Saccolabium, Sarcanthus, Spathoglottis, Thunia, Vanda, Vandopsis: COLLECTORS' ITEMS: Bulbophyllum medusae 'alba', vaginatum: Dendrobium albosanguineum, cruentum: Epigenium nakaharii: Paphiopedilum hookerae, stonei: Yellow Spathoglottis.

FLASKS: Mini — 6 seedlings: Slimline — 35-40 seedlings: *Acampe* multiflora: *Aerides* lawrenceae Sanderiana, virens 'Pink', virens 'Alba', falcata: *Angraecum* longicalcar, comorense: *Ascocentrum* miniatum: *Brassavola* nodosa: *Cattleya* bicolor, bowringiana 'Black Prince', harrisoniae, luteola, mossiae, Rex: *Coeolgyne* cinnamoneae: *Dendrobium* affine, dicuphum 'Alba', farmerii, ruppianum, tofftii, trigonopus: *Gongora* quinquenervis yellow: *Grammatophyllum* speciosum: *Ionopsis*: *Laelia* sincorana: *Oncidium* jonesianum, maculatum, papillio, sprucei, tetrapetalum, triquetrum: *Rhyncostylis* coelestis: *Stanhopea* tigrina, wardii: plus 138 other species and hybrids, in 34 different genera.

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2½" Pot — $10.00 each.
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This outstanding orchid has everything going for it. Colour, shape, texture, the lot. Don't miss it.

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A smart-looking concolour which is very attractive with its rippled labellum.

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One look at this one and you will have to have it too. But don't leave it too late. It is superb.

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TOP-QUALITY CATTLEYA MERICLONES

They will bring you much pleasure as the years go by and later you will be glad that you did.

Blc. CADMIUM LIGHT 'GREEN ELF', HCC

A lovely green flower with a startling red spade labellum.

Pot. NAOKAZU 'FIREBALL'

A brilliant red orchid worthy of a place in every collection.

Blc. GREEN GIANT 'ALPHA GREEN VALLEY'

A beautiful green orchid.

Pot. RAINBOW BAY 'FORMOSAN RUBY', AM/TOS

An unusually-coloured orchid. Pink-salmon, good shape and texture.

Blc. PORTS OF PARADISE 'EMERALD ISLE', FCC/AOS

A gorgeous, all-over green flower with an outstanding labellum.

Blc. FAYE MIYAMOTO x Blc. CHIEF JOSEPH

A lovely golden orchid with a brilliant red labellum.

ALL OF THE ABOVE PLANTS ARE IN 2½" POTS. $10.00 EACH PLUS POSTAGE.

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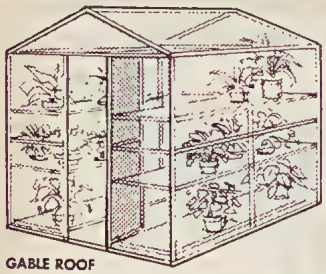
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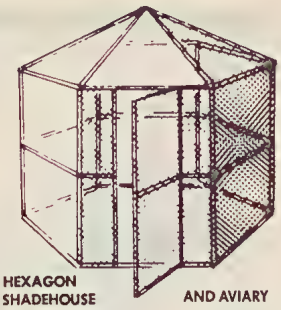
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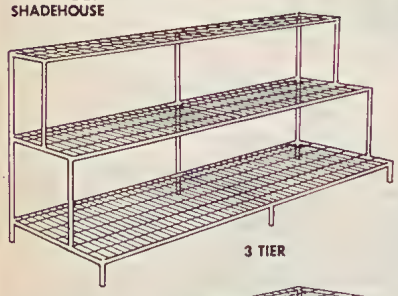
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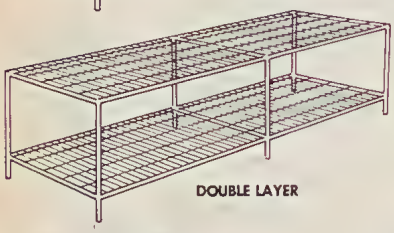
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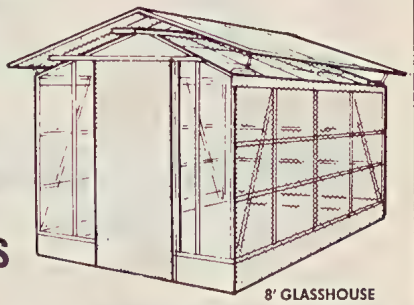
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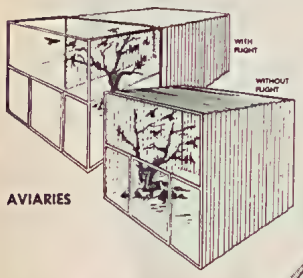
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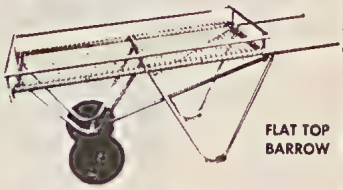

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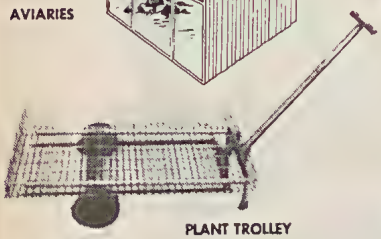

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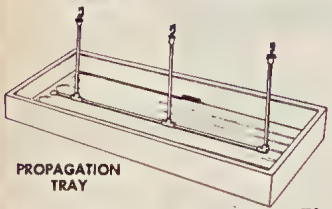

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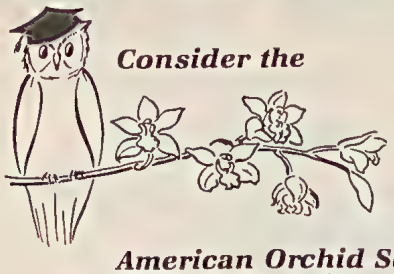
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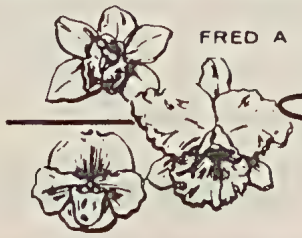
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KM300 **Ascda. Aribarg 'Red Laquer' x V. Kasem's Delight** — *exquisite red-purples. Size A = $3.*

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AUSTRALIAN Orchid REVIEW

SEPTEMBER QUARTER
Vol. 49 No. 3

Printed and Published by:
GRAPHIC WORLD
14 McGill Street, Lewisham 2049
560 6166

- **Editorial Associates:**
QUEENSLAND: Mr Frank Oelkers, 419 Robinson Road, Geebung 4034.
VICTORIA: Mrs I. Hutchins, 37 Elliot Street, Mordialloc, Victoria 3195.
SOUTH AUSTRALIA: Mr N. Lenkic, GPO Box 730, Adelaide, SA 5001.
WESTERN AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154.
TASMANIA: Mr C. Nicholas, 7 Kelvin Avenue, Moonah, Tasmania 7009.
INTERNATIONAL: Mr G. H. Slade, Box 797, Vila, Vanuatu.
- **Editor: Ronald Kerr.**
- **Editorial Committee:**
R. KERR, G. HANSEN
A. B. PORTER, R. MILLER
- **Address Editorial to:**
R. KERR, 260 Geoffrey Road Chittaway Point, NSW 2259 Phone: (043) 88 2605
- **Advertising, address to:**
ELIZABETH LOWE, 14 McGill Street, Lewisham, NSW 2049. Phone (02) 560 6166
- **SUBSCRIPTIONS.** 1984. Within Australia $15.00. Overseas surface $16.50 (Australian). Airmail rates on request.

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Contact these secretaries:

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QUEENSLAND: The Secretary, GPO Box 2002, Brisbane. Phone: 377 3253.

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SOUTH AUSTRALIA: Mr D. J. Harris, 36 East Avenue, Black Forest 5035. Phone: 297 7525.

WEST AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154. Phone: 330 2132.

TASMANIA: Mr J. F. Smith, 11 Warren Court, Howrah 7018. Phone: 44 1555.

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To comply with the International Code of Botanical Nomenclature the whole of a species is in *italics* and the second term has no capital. With hybrids only the first term is in *italics*, the second starts with a capital and is not latinised. Generic names, used in a non-botanical sense do not have a capital nor are they in italics. In society bulletins and on place-cards italics can be indicated by underlining.

COVER STORY

Sarcochilus hartmannii is one of our most fascinating orchids and this is a superb photo. Grower, Mr Donovan Linney, tells his own story on page 188. *Sarcochilus falcatus*, type species for the genus has a fascinating history and Dr Peter Adams describes it on page 207. See the fine illustration on page 196.

FUNGI AND ORCHIDS

DR NOEL GRUNDON

Acknowledgements to the Queensland Native Orchid Bulletin.

Firstly, I should explain a few things so that you know what to expect from me on this subject. I am not a plant pathologist – one who is trained in the control of plant diseases caused by fungi. I am a plant nutritionalist – one who is trained in the use of fertilizers on plants. Like you, my hobby is growing orchids; and it is through my profession and my hobby that I became interested in fungi and how they interact with orchids.

I have sub-titled this article 'A story of goodies and baddies', and as we go along, I hope you will see why I have used this sub-title.

Right at the start let us get some idea of the size of the things we will be talking about; fungi. We have all seen a fungus – toadstools and mushrooms. But the fungi I am interested in here are very much smaller than the smallest toadstool.

The fungal cell is much smaller than the plant cell it attacks. A fungal cell is a bit more than one micron wide; so how many could we line-up side by side to give an inch? In an inch we have 25 mm and there are 1000 microns in each mm. So there are 25,000 microns in an inch, and we would need about 20,000 fungal cells side by side to make that inch.

So what can a fungus do to an orchid? Well it can either leave it alone or attack it. The first group we call the non-pathogenic fungi. These do not cause diseases. The second group is divided into two sub-groups – the mycorrhyzal fungi and the pathogenic fungi. The pathogenic fungi causes diseases and they are the baddies of this story. The mycorrhyzal fungi and the non-pathogenic fungi are the goodies.

Where do the goodies fit into the system? An orchid has roots and leaves. The roots are in soil, compost or on wood, bark or cork mounts. The good fungi assist the orchids to take up the nutrients it needs to live and grow. The non-pathogenic fungi decompose litter such as leaves, bark, etc to release the minerals or elements plants need for their growth. The fungi live outside the plant root and need little real contact with the orchid. The minerals they release can be washed to the orchid by rain.

But the mycorrhyzal fungi are very different. They are closely associated with the roots of orchids. Some of the cells of the fungus inside the root are connected to the fungus in the surrounding soil or compost. So the fungus acts as an extension of the root system of the orchid, transferring sugars from the outside of the plant into the orchid. In nature, when an orchid seed germinates, the young embryo uses the small reserves of the seed to produce a protocorm. If the orchid is to continue to grow, the protocorms must be attacked by mycorrhyzal fungi which invade the protocorm. The orchid kills some of the fungal cells inside itself using a natural fungicide. It then digests the dead fungal cells and uses their sugars to provide itself with the energy to grow. At this stage of its growth, the orchid depends completely upon the fungus. In fact, it is difficult to work out if the fungus attacked the orchid or if the orchid attacked the fungus.

After a while, the orchid develops roots and leaves and becomes able to produce its own sugars. Therefore an orchid plant has two very different stages in its life:– during seed germination it depends completely upon mycorrhyzal fungi to supply its sugars. This is its saprophytic stage when it acts as a parasite on the fungus. The length of time an orchid remains a parasite depends on the species. In many, this stage lasts less than a year and the seedling matures into a plant able to fend for itself. Sometimes the fungus is completely killed out by the orchid and the mature plant has no mycorrhyzal fungus. Most terrestrial orchids seem to do this. However, the epiphytes seem to keep some fungus alive even in the mature plant. Some species never become self-sufficient and remain parasitic or saprophytic all their lives. Examples of these are *Dipodium punctatum* and *Galeola foliata.*

The benefits of mycorrhyzal fungi can be explained best by this example. We know cymbidiums as green plants able to grow and look after themselves in sunlight. But they can grow in darkness when supplied with a source of sugars such as polypodium fibre and infected by the right mycorrhyzal fungus.

So much for the goodies. Now for the baddies – the disease causing fungi. There are three stages in the development of a disease: 1. Inoculation – The plant cannot get a disease if there is no fungus present. You and I don't get the 'flu until the 'flu virus comes around. An orchid is the same – it will not get any disease until the fungus is present. The fungus usually comes along as spores which land on the leaves and germinate when there is water on the leaf; just like the spore of ferns, etc.

This begins the second stage, the penetration of the fungus into the leaf. If a fungus is to live off the orchid, it must penetrate the leaf either through wounds, natural openings or directly through the surface cells.

The final stage is when the fungus infects the living cells of the orchid and kills them.

Let's look more closely at how the fungus gains entry to the leaf to see if we can find weaknesses in the system that we can use to our advantage in preventing diseases. In penetration through wounds, the fungal spore germinates on the leaf and the fungus grows down into the leaf through the wound. So the less wounds there are, the fewer chances fungi have of invading the plant.

In penetration through natural openings, there is little we can do to prevent entry through stomates and the like. The fungal spore germinates on the leaf surface and grows down through the open stomate. About all we can do to prevent this form of entry is to prevent the spores from germinating in the first place.

In direct penetration, the fungus again germinates on the leaf surface and burrows directly through the surface of the leaf. Sometimes it enters between the cells, and other times it drills directly through the outside walls of the cells.

Well, that is how fungi attack plants. Let's look again at the stages in disease development and see how we can prevent fungi attacking orchids. If we could prevent any of the stages occurring we could stop the disease. And by following a few simple rules we can do just that.

We can prevent the inoculation stage by using good sanitation in the orchid house. By this I mean that all diseased leaves or plants should be removed and quarantined or destroyed, preferably by burning. This cuts down the number of spores that there are around to spread the disease. You can also prevent the disease spreading by remembering that you and I are the most common cause of carrying fungal spores from one plant to another — on our hands or clothing or knives, etc.

A good saying is that a plant growing well is a healthy plant. Plants will grow well if they are given the right pH in their compost (Phythium like low pH, *Phytophthora* likes high pH); the right amount of fertilizers when they need it; the right amount of water when they need it; the right compost means good drainage which in turn means less chance of root rot. If you do everything you can to keep your plants growing well, you will have healthier plants. Good air movement keeps the leaves dry and so prevents the fungal spores on the leaf from germinating.

We can prevent penetration of the fungus into the plant by applying chemicals which kill the germinating spore before it has had a chance to enter the plant. These are protectant chemicals. They will act on the fungus only while it is outside the orchid. Examples of such chemicals are Captan, Maneb, Mancozeb, lime-sulphur. Once the fungus has penetrated into the orchid these chemicals are completely useless.

The only method of preventing infection once the fungus has gained entry into the orchid is by using systemic chemicals. Examples of these chemicals are Benlate, Alliette, Terrazole.

Some words of warning when you use either protectant or systemic chemicals:

1. **Read you label first.** Find out if it is a protectant or systemic chemical you have. Remember, a protectant chemical is useless once the fungus has gained entry into the orchid.
2. **Apply the right chemical to control the disease.** Read the label; it will tell you what diseases the chemical controls. Benlate will not control Phythium damping-off; Alliette does.
3. **Use only the recommended rates.** The chemicals are toxic to the orchid and too much will kill the orchid; it is also hard on the pocket. Too little chemical kills only the weak fungi and leads to development of strains which are resistant to the chemical.
4. **Again, read the label FIRST!** Don't be like the joker who when all else fails, then reads the label.

4 Jean Street, Toowoomba, Queensland 4350

TROPICAL QUEENSLAND ORCHID COUNCIL

1984 Conference

This year's conference was held in Bowen over the Queen's Birthday weekend. Patron Mr Frank Slattery and Mrs Jean Slattery attended and as usual passed on some of their expertise. Frank has attended all of the twenty or so conferences held by the council.

Sessions were conducted by Marg Purnell, the very knowledgeable ceratobium (correctly Spathulata) hybridiser from Mackay. Yvonne Black, whose salesmanship (will we be accused of discrimination for not saying salespersonship?) won the 8th Australian Orchid Conference for Townsville, spoke on cymbidiums suitable for growing in North Queensland. A valuable contribution was made by Greg Williams who spoke on how Rockhampton organises its new growers' group.

In spite of the drought conditions participants were able to visit many interesting Bowen collections and nurseries.

The annual general meeting of the Tropical Queensland Orchid Council took place on the Sunday morning, whereat it was resolved to hold the 1985 conference in Townsville. The balance of the weekend was devoted to social activities, including an excellent official dinner, and a showing of "off the beaten track" slides featuring North Queensland and Central Australia.

Orchid Society of NSW Anniversary Dinner

The Orchid Society of New South Wales was officially formed on August 6, 1934. It was appropriate that the dinner to celebrate the attainment of its fiftieth anniversary would also be on August 6. This happened to be a Tuesday, a day usually regarded as difficult for an important function. Nevertheless there was a splendid gathering of people who have been closely associated with the society over the years.

The function was held in a delightful dining room at Randwick Racecourse. Delightful because of the huge glass wall which overlooked the race track and the wide vista of suburban lights. On the entrance side the view embraced the fantasy skyline of Sydney city.

The occasion was graced by the presence of the society's patron His Excellency Air Marshal Sir James Rowland, Governor of New South Wales, and Lady Rowland.

It was an honour too, to receive the president of the Australian Orchid Council, Mr Charles Hill, who journeyed from Brisbane for the occasion.

In his speech Mr Walter Upton, president of the Orchid Society of New South Wales, outlined the society's history and paid tribute to the many who had helped its progress.

The President's Address

Your Excellency, Lady Rowland, honoured guests, ladies and gentlemen. We are extremely honoured to welcome Your Excellency and Lady Rowland here on the occasion of our 50th anniversary. We are also most proud to welcome you, sir, as the patron of our society.

To be fifty years of age has a happy ring to it, particularly when it is the society that is ageing and not necessarily its members, youth is the future of any organisation and I am sure we have a great future.

A society is its members and its greatness can only be measured by their accomplishments. May I therefore dwell for a few moments on some of the pleasantries of the past.

We have two of our foundation members with us tonight.

Jack Bisset has always figured in the forefront of our society and his achievements are many. One that stands out — he pioneered the competitive trade orchid shows, also many of you will remember the delightful displays he set up on the stage of the Sydney Town Hall.

Hermon Slade, was the first editor of the *Australian Orchid Review* and successfully led it through those difficult formative years. Hermon has carried our name to the four corners of the earth during his frequent world wanderings.

Our fifth president, Alan Begg, is also with us tonight. Other past-presidents here are Jack Bisset, A.B. Porter, Bert Schwartz, Barry Collins and Syd Waldie.

The two that I have missed out are Frank Slattery and Lou Sasso because they both served two three-year terms as president and furthermore I think they are probably the best-known Australian orchid growers in the world.

Frank is the immediate past-president of the Australian Orchid Council. Lou has probably received more awards and medals than anyone else in the world, he even won a medal for a group of cut cymbidiums at the First World Orchid Conference.

There are many other members with us tonight who have served our society in many positions, Les Peaty our MC, Bill Smoothey, Gordon Hansen, Ron Kerr and the Chalmers Family.

But what of the orchids for which our society was formed.

It is interesting to note that most of the early-described orchids, native to Australia, came from NSW. Indeed, the first two Australian dendrobiums came from the Sydney area, *Den. linguiforme* was described in 1800, and *Den. speciosum* in 1804. However, the large percentage of orchids grown by our early members were cymbidiums and even today this genus is still the most commonly grown.

At our early shows cymbidiums always dominated. It is very interesting to read that at our first competitive exhibition, held at the County Council electricity showrooms in George Street in 1947 and which was insured for £12,000, the winning orchid was *Cymbidium* Girrawheen 'Enid' owned by Dr A.C. Burstal and the joint second was *Cymbidum* Cassandra 'Toxteth' owned by W. Worth and *Cymbidium* Miranda 'Maisie' owned by Grace Mitchell, who died in a car accident only last year. Lou Sasso at that same show won the first gold medal for a group of miscellaneous orchids in an area 20 feet x six feet. It included a *Dendrobium speciosum* with 14 racemes of flowers which won the best native orchid.

Our first show held at an outside venue was in 1936 at Vere Matthews' cafe in King Street. We read 400 visitors attended.

After that shows were held at Farmers' Blaxland Galleries and in David Jones' in George Street. In 1940 5,260 visitors saw the show at D.J.'s.

During the war years there were no shows, except for many small exhibitions to help the war effort.

After the war our first show was in Beard Watsons in George Street.

It is quite interesting to note that between 1947 and 1967 only six cymbidiums figured in the championship — *C.* Dorchester 'Janette' seven times, *C.* Girrawheen 'Enid' six times, *C.* Marion Lenfestey 'Splendens' three times, *C.* Balkis 'Luath' twice and *C.* Cooksbridge 'Elvina' and *C.* Sayonara 'Aureolin' once each.

Dr J. Burstal who won many of these championships is with us tonight.

Our first Spring Festival at the Sydney Town Hall was in 1949 and included district exhibits for the first time. The first affiliated society to win was Eastwood and District Orchid Society. They were also first in the second year but in the third year Western Suburbs Orchid Society took that honour.

The festivals continued at the Sydney Town Hall until 1970, except in 1969, when it was held in conjunction with the Sixth World Orchid Conference Show.

Our shows at the Sydney Town Hall have been opened by the Lord Mayor of Sydney, the Governor-General of Australia, His Excellency Field Marshal Sir William Slim and the film stars Anne Baxter and Nelson Eddy.

The year that Nelson Eddy opened the show was the first time native orchids were displayed on the stage. What a fantastic display that was. It was Ron Kerr's brain-child, thanks Ron. It was also the first time native orchid displays became competitive. North Shore Orchid Society was the first affiliated society to win. The champion native was *Dendrobium kingianum.*

Our first Winter Show was in 1947 and was held at the YWCA in Liverpool Street. It was referred to as "Slipper Day". The first Winter Show at which prizes were given was in 1951 and the best paphiopedilum was *P.* Balaclava 'Margaret' owned by Mr W. Fahey.

In 1952 Lou Sasso's *P.* Langley Pride was first, in 1953 his *P.* Bonita, in 1954 his *P.* Langley Pride and in 1955 his *P.* Tearlath 'Margaret Ann'. Well done Lou.

In 1958 the first paphiopedilum championship was commenced and was won by Mr R. Mead with *Paph.* Tearlath 'Distinction'.

During 1959 and 1960 again saw *P.* Langley Pride 'Laelio Sasso' win the championship.

Apart from the Sixth WOC Show in 1969, when the champion was *Phalaenopsis* Bridesmaid 'Purity', the first orchid other than a cymbidium to win the championship at our Spring shows was in 1971 when Mrs Medcalf's *Blc.* Sylvia Fry 'Wallacia' won the grand champion at Westfield Shoppingtown, Burwood.

For the last fourteen years our shows both Winter and Spring have been held in shopping centres and for the last eight years our Spring Show has been at Roselands.

How one could go on reminiscing, but nay, I must cease. I would like to finish with a few words of Dr R.S. Rogers, one of Australia's leading orchidologists, referring to those who participate in our hobby.

"There will probably be the business man who will regard it as of occupational interest. Then there will be the grower who loves his garden for its own sake and desires to exchange views on matters of horticultural technique; but I take it that the majority will comprise that large and ill-defined body of people, young and old, rich and poor, trained thinkers or indifferently educated, who seek a restful, scientific hobby which will provide them with an interest, not only under restricted circumstances but one which may be exercised individually or collectively and irrespective of time and place . . . the only essentials are honesty and accuracy of observation. It is an inspiring thought that any ordinary individual is capable of adding, however slightly, to the sum of human knowledge, and at the same time provide him with a perennial interest. In this school he learns humility and perchance acquires wisdom."

Once again, Your Excellency, Lady Rowland, welcome.

It now gives me great pleasure to invite His Excellency to address us.

Sir James Rowland then addressed the gathering and showed that he was quite familiar with the history of orchidology and its status as a worthwhile hobby. It can truly be said that Sir James is much more than a figurehead patron.

Afterwards in less-formal conversations with management committee members and others Sir James and Lady Rowland showed their keen interest in the activities of the society.

Fine entertainment enhanced the occasion, after which the vice-regal party retired. Dancing and social mixing continued until after midnight.

GERALD McCRAITH HONOURED

The expedition to the Carron Valley, sponsored by The Australian Orchid Foundation in association with the Queensland National Parks and Wildlife Service, has found a new species of *Habenaria.*

Dr P.S. (Bill) Lavarack was expedition leader. With him were Dr Phillip Cribb of Kew and leading Australian and New Guinea botanists.

In recognition of the many expeditions sponsored by the Foundation the new species has been named *Habenaria macraithii* after its executive director. Every orchid grower in Australia, and many overseas, will be aware of Gerald McCraith's nearly fifty years of devotion and service to orchidology.

BOOK REVIEWS

Revision of *Dendrobium* Section Latouria

This book is a reprint from Kew Bulletin Vol. 38(2) 1983 and covers a review of the section by Dr P.J. Cribb.

The review is the result of a request by the International Orchid Commission that this section and section Ceratobium be examined due to their increasing use in hybridising. Most species in these sections are to be found in Papua New Guinea.

In recent years unnamed and uncertainly-named species have been used by hybridisers in Hawaii and Australia. Most Latouria species are spectacular orchids with the great virtue of extremely-long flower life. They have been used in breeding by Australian hybridisers K. McFarlane, D'Bush Nursery (the Colemans), P. Spence, K. MacPherson, G.H. Slade, the late Mrs E. Kirkwood and others. Only recently Cathedral Orchids of Santa Barbara made the first registration of a cross from *Dendrobium engae*, a Latouria species only described in 1979 (see colour illustration AOR for June 1981).

Thus this revision is extremely timely and will be valuable to both hybridisers and to those who buy their seedlings. In conjunction with the English translation of Schlechter it provides another step in the unravelling of complexities in PNG taxonomy.

Dr Cribb begins with a brief introduction and some historical aspects of Latouria taxonomy, then a clear description of vegetative and floral morphology. A table shows crossibility as indicated by registered crosses between Latouria species and other dendrobium sections.

A study trip financed by the Australian Orchid Foundation enabled Dr Cribb to visit Papua New Guinea and speak with such practical field botanists as T. Reeve, T. Chadim, H. Howcroft and Rev Canon Cruttwell, and also collect new specimens. He also visited Vanuatu and the herbaria at Lae, Sydney and Melbourne and met with experienced Australians Dr P. Lavarack, D. Blaxell, P. Spence and others. A detailed study was made of the large number of Latouria specimens held at Kew.

The result is a very detailed account of the section. In all aspects Dr Cribb plays safe. For instance, he acknowledges Dr Brieger's renaming of Latouria to generic status as *Latourorchis* but states "for this study the name Latouria is conveniently retained and it is under this name that these plants are best known".

Dr Cribb does indicate certain groupings within the section but considers they do not warrant separate recognition "providing that the aberrant species *D. bifalce* and the eight species allied to D. *aberrans* are excluded". After reducing some species to synonyms he provides an artificial key for 53 species and four varieties. A detailed description is given, first in technical terms and then in horticultural language, followed by details of background and habitat.

Maps of distribution for each species are given, and most of them are pictured, either in colour or by the meticulously-accurate drawings of N. Howcroft and those from the Lae Herbarium collection by Miss S.P. Hillier, Mrs Damaris Pearce and Mrs M. Church.

Colour photos are by P. Spence, M. Svanderlik, T. Reeve, R. Zabeau and P. Cribb. There are also many fine black and white photos by A. Chadim.

An interesting exclusion from the section is the Australian species *D. bairdianum* which Dr Cribb considers to be in the section Eleutheroglossum.

The book is a splendid contribution to our knowledge of this interesting *Dendrobium* section which is so full of species of splendid horticultural merit.

It is available from the Australian Orchid Foundation, 107 Roberts Street, Essendon, Victoria 3040 at $20 including postage.

The Tropical Asiatic Slipper Orchids

This book might easily have been titled *All you need to know about paphiopedilums to grow them well, at a price you can afford.* The author, Keith Bennett is a marine engineer, now retired and living in Sydney.

Mr Bennett is a practical grower with a large collection of paphiopedilums. He writes succinctly in a way even an inexperienced grower can follow, yet he maintains botanical accuracy. Not only is Mr Bennett a knowledgeable grower, he has researched the history, distribution and taxonomy thoroughly. His aim has been to give "plant descriptions . . . with as little botanical terminology as possible in order to save the reader from constantly having to refer to a glossary of terms". He has succeeded in doing this admirably.

In recent years new *Paphiopedilum* species have been discovered and some long-lost ones rediscovered. Mr Bennett has followed these by personal communication with English authority Mr M.W. Wood and *Orchid Digest* editor Dr J.A. Fowlie, as well as Chinese experts Professor Wu Zhengyin, director of the Kunmung Institute of Botany and Mrs Li Hen of the same institute.

Thus this book can be acclaimed as the most complete book available on the species. The chapter on classification is right up-to-date and removes any confusion on differences in taxonomy. A chapter on horticultural history is short but illuminating. Another on culture is admirably simple to follow.

A minor weakness is that propagation could have been covered a little more fully. As it stands it can easily be followed by a grower experienced in other genera but may not be complete enough for a novice. For instance, mention is made that after re-potting into 80 mm pots "they no longer require bottom heat" yet no previous mention was made of bottom heat for de-flasked seedlings.

Fortunately this genus is resistant to most pests, and the controls recommended by the author are simple.

The second part of the book consists of a detailed description of every known species in alphabetical order. The collective epithetic (full name), the botanists involved and date of naming are followed by subgenus, section if applicable, synonyms if any and distribution. Descriptions are very accurate and in most cases natural environmental details are given.

A valuable section containing 82 colour plates covers nearly every known species. Many of these pictures are from slides supplied by well-known paphiopedilum grower Mr John Marks.

The book is highly recommended to paphiopedilum fans and for society libraries. It is available in bookshops after September 20 at $19.95. Angus & Robertson Publishers, PO Box 290, North Ryde, NSW 2113.

BOOK REVIEW

Orchids of South-West Australia

NOEL HOFFMAN AND ANDREW BROWN

This book covers every known West Australian terrestrial, including several as yet unnamed. It sets a standard by which all future Australian orchid floras will be judged.

Colour and simplicity are its keynotes. No one possessing it could fail to identify any species found in the bush, although there could be some difficulty with natural hybrids.

The opening chapter on distribution, structure and growth is short and to the point. Then follows a remarkable key to the genera: in about ten words, or less, the **essential** features for each genus are given alongside a colour illustration. Since this covers only five pages genus recognition is a matter of seconds, even for anyone totally inexperienced with orchids.

Having established the genus the reader looks at the page number alongside the picture and turns then to the start of the pictures for each species.

Each species picture takes up a full left-hand page. On the right-hand page is a very full non-botanical language description.

Under this is a distribution area map, coupled with flowering time and common name.

Some of the illustrations are two to three times actual size. While this is a help to identification it would have been an advantage for a more accurate indication of scale than the one given. In the case of *Thelymitra pauciflora*, for instance, the size is indicated by "Dorsal sepal: 5-8 mm" which obviously refers to the width. With *Caladenia macrostylis* it is given as 25-40 which refers to the length. To show the variation is admirable but a little more information on size, including stem height could be an advantage in the next edition, which will assuredly come.

There are some splendid pen-drawings by David Howard and easy-to-follow mapping by Cheryl Lynch. The end-papers carry the same overall genera map showing locations mentioned in the text.

The glossary covers only one page of terms every experienced orchidist will know. It will be useful to the neophyte. The text is so lucid and non-technical that a detailed glossary is not necessary. A short list of references is given. There are indices for both scientific and common names. Established varieties within a genus are also shown.

West Australia is unique in having such a splendid range of terrestrial orchids. Some are endemic but many are also found in other States. But even if you have no practical use for this book it is still worth its place in any orchid library for the beauty of its illustrations alone. Yes, there are two photos of the underground orchid *Rhizanthella gardineri*, one shows the capitulum, the other *in situ* with half the soil dug away.

The book is published by the University of Western Australia Press. It may be obtained from the Australian Orchid Foundation at $35 for hard cover and $25 for paper cover. Add $4 for postage. The publishers sold all hard-cover copies within a week or so, but the Foundation may have some. Hurry.

ANOS WEEKEND WORKSHOP

As part of their 21st anniversary celebrations Australasian Native Orchid Society members conducted a most interesting workshop at the Naamaroo Conference Centre, Lane Cove. It was held over the weekend of July 7 and 8. The Centre is situated alongside the Lane Cove River and the Lane Cove National Park and is surrounded by picturesque bushland.

Most of the top native growers were there, including a number from other States.

Mr Alex George came all the way from Canberra to speak on preparations in hand to create the volume on orchidaceae for the *Flora of Australia*. Mr George has the mammoth task of editing the twenty or more volumes of the *Flora*. Already a few have been produced. Unfortunately, the orchidaceae volume will not be available until 1990. This will be the first major revision of Australian plants since Bentham and Mueller's work over 100 years ago.

Scientists Dr Noel Grundon and Dr Ben Wallace made valuable contributions to the Workshop. The former on fertilizers, the latter on aspects of Australian Sarcanthinae.

Dr D. MacAlpine contributed a paper on insect pollination and Mr L. Lawler on orchids of north Queensland's Iron Range.

Valuable contributions on culture came from Messrs R. Gifford, L. Jarvis, M.J. Corrigan and D. Cannon. The latter came from Melbourne to speak on hybridising.

On the Saturday night a most enjoyable anniversary dinner took place with Sydney Herbarium botanist Mr Don Blaxell as guest speaker. Mr Wal Upton, who served as first secretary and did a tremendous organising job during the formation of ANOS, gave a concise and amusing account of the society's early days.

Members of the original committee were invited to this function. Regrettably the two early mainstays of the society were unable to be present in person, but they were certainly there in spirit. Bill Murdock, founder and first president, and Eric Gordon have made great contributions to the society. It is good that they are still inspiring native growers, albeit past the stage of attending late-night anniversary dinners.

Anniversary organisers are to be congratulated on the fine book of proceedings.

WARNING "DON'T TOUCH"

A single seedling on agar in a plastic phial is on offer in a few retail outlets. A picture of a cattleya appears on the label but the seedling appears to be something else. Certainly no one without proper facilities and experience could hope to bring it to maturity. Save your money and buy an established seedling at your favourite nursery. It will probably be cheaper, too.

Tribute to Victoria

September 12 to 16, inclusive, the Victorian Orchid Club is Host Society for Australia's Ninth Orchid Conference.

Victorian growers have made great contributions to the development of orchid growing in Australia. There are now nineteen very active orchid societies in Victoria, and in the metropolitan area attendances at meetings are booming.

The Victorian Orchid Club was the first-organised orchid body formed in Australia. That was over sixty-one years ago. It began with occasional meetings by growers in each others' homes. Then on May 13, 1923 Mr David Chandler of Tooronga Road, East Malvern, organised a meeting of thirteen people in his home and proposed the formation of an orchid club.

The inaugural meeting was held in June at the Independent Church Hall, Collins Street, Melbourne, with 23 people present. The subscription was fixed at five shillings.

Most early orchid collections were on estates owned by wealthy families who followed the English tradition of employing gardeners and building conservatories and glasshouses. One such estate was "Ripponlead" owned by Mr Ben Nathan. Another was the famous Dandenong estate of Mr A.M. Nicholas, founder of the Aspro firm. Club members were made welcome at these estates.

The first show was held in 1930. During 1938 and 1939 Spring Shows were held in the Botanic Gardens under a large marquee. In 1940 a magnificent show in the Fitzroy Gardens raised £454/11/3 for the War Comforts Fund. Due to wartime pressures meetings were suspended until 1944. After the war Spring shows were held in the Melbourne Town Hall until 1953, and afterwards at various centres. The substantial profit from these shows went to worthy charities.

In 1960 members responded with enthusiasm to Sir John Hall Best's call for a national co-ordinating body, and so the Australian Orchid Council was formed. This made possible organising of orchid conferences in Australia. The Victorian Orchid Club has contributed substantially to the work of Council.

Victorian hobby growers receive cultural help and interesting social contacts from a wide range of activities organised by the VOC.

The VOC has provided help in the formation of new societies. Speakers and judges have been provided as required and every effort made to help people enjoy orchid growing.

Alongside strong growth in societies has been the development of orchid nurseries. Victorian hybridisers have developed outstanding cymbidium strains. Foremost was the late Mr Russell Martin, DFC. He was one of the first to realise the importance of local hybridising. He introduced top English stock in alliance with McBeans. The best McBeans clones were crossed with top Australian stock. Later Russell bought back McBeans' interest in his nursery.

Russell Martin produced a long list of new crosses, including the fine pinks among the *C.* Rose Hill clones, and reds among the *C.* Iron Knob and *C.* Ayers Rock grexes.

Mr Bob Hodgins has produced some of the finest yellow cymbidiums available anywhere in the world. These splendid plants are based on the show-stopping yellow tetraploid *C.* Wallara 'Gold Nugget'. Crossed with *C.* Borough Green 'Conference' it produced *C.* Jubilation. Several plants of this cross have been awarded. Most are deep and clear yellows with contrasting red lips, excellent flower shape and attractive spike habit.

Bob also crossed *C.* Wallara 'Gold Nugget' with *C.* Mary Ann 'Simplicity' to produce *C.* Captivation and with *C.* Sussex Dawn to create *C.* Idolize.

Other cymbidium hybridisers are currently doing good work. They include Glenwood Orchids, Sandon Exotics and Mt Beenak Orchids. Several nurseries are working with cymbidiums and other genera. All are worth visiting.

Undoubtedly the Victorian-based organisation which has made the greatest impact upon Australian orchidology is the Australian Orchid Foundation. It is the brainchild of Mr Gerald McCraith who has long been a practical and highly-successful grower, as well as serving the VOC in many capacities.

The Foundation is a voluntary and non-profit organisation for the benefit of orchids, and the people interested in them, both on a scientific and cultural basis. It is financed by the contributions of individuals and orchid societies. It is an incorporated body administered by a board comprising Messrs G. Hermon Slade, G. McCraith, J. Mackinney, F. Slattery, Dr W.J. Rigg, Dr A.R. Parkin and Mr F.W. Paddock as secretary.

The Foundation has financed conservation projects and assisted scientific research, assisted herbaria, including Kew, initiated and wholly or partly-financed expeditions, published orchid books and made plants available for research and to societies. A major project has been the translation into English of Schlechter's *Orchidaceae of German New Guinea.*

Research in growing and hybridising has led to the introduction of genera rarely seen before in Australia, namely those of the Odontoglossum Alliance and the genus *Disa.*

The Foundation has become an orchid organisation of world importance.

Victorian contributions to world orchidology

Many developments in orchid horticulture have taken place in Victoria.
These illustrations symbolise just two of them.



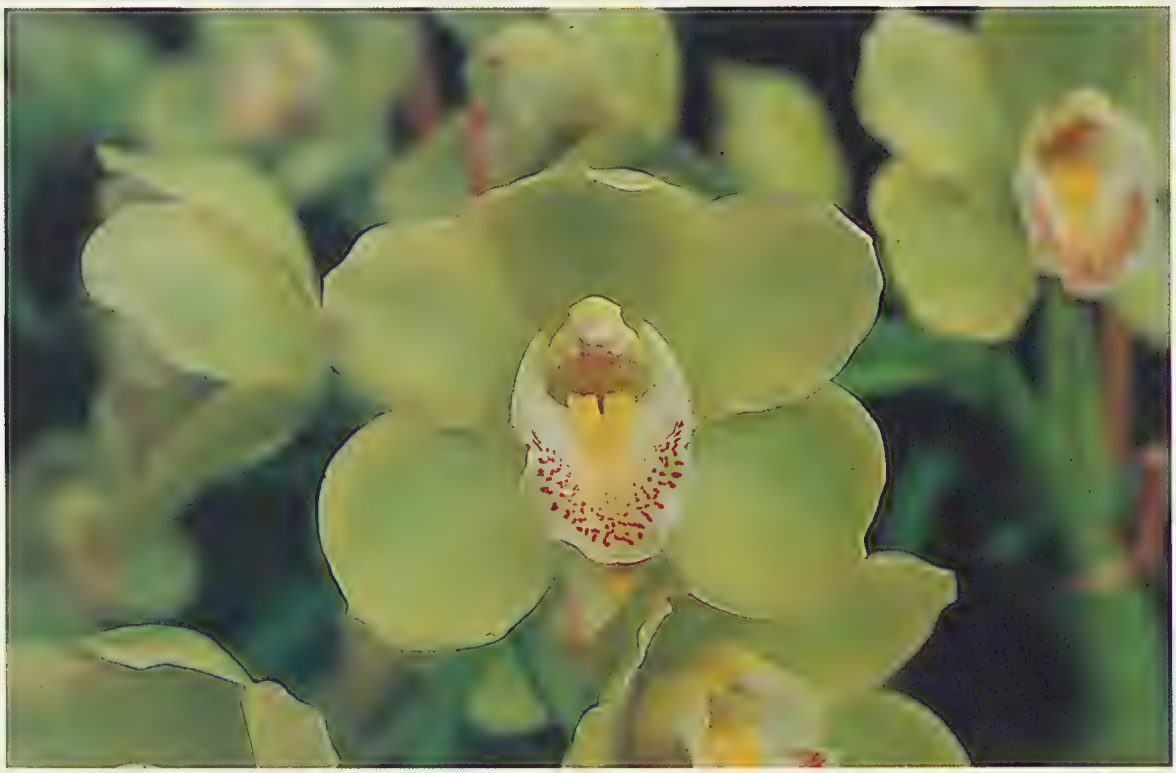
***Odontioda* Main Ridge**

A cross between *Oda.* Florispum and *Oda.* Brocade which indicates the striking colours found in this alliance. Mr Gerald McCraith hybridised and popularised these plants. Proceeds from the sale of plants have gone to the Australian Orchid Foundation.

***Cymbidium* Jubilation 'Cashmere'**
FCC/AOC

From a cross registered in 1977 by Mr Bob Hodgins. Clones from this cross are noted for outstanding yellows. At one end of the colour range are some fine pastel yellow-greens like this awarded plant.

Photos: Gerald McCraith



The magic of Miami, March 1984





The greatest orchid show ever held

Superlative would be the one adjective to sum up the Eleventh World Orchid Conference Show. But that one word does not fully convey the immense efforts by thousands of people who contributed towards making it the greatest orchid show organised up to this time.

Boldness in conception and responsibility in facing the huge costs involved were the fundamentals for which the organising committee must be praised. Rumour places the committee's costs at over a million dollars. Added to this are the costs of the exhibiting societies and individuals. But the grandeur of the show made a million seem cheap.

The South Florida Orchid Society was the conference host society. To facilitate legal and operational needs the society established a separate corporate body, and co-opted skilled helpers wherever possible.

Show venue was the huge exhibition building known as Coconut Grove, situated about ten kilometres south of Miami. Correctly it was two large buildings with a common wall, each covering about one acre.

Many exhibitors spent up to three days building their display. Mounds of sand were used as the basis of most displays. After shaping as needed the sand held pots, ornamental plants and even trees quite firmly. Except where a beach scene was intended it was completely hidden when the display was completed.

The working committee, chaired by Mr Robert Scully, jnr included such well-known orchidists as William Merrit, Milton Carpenter, Mary and Jack McQuerry, Lewis and Varina Vaughan, and Dr Thomas Sheedan. Marianne Plock was secretary, Russell Crete, treasurer and Susan Skeoch, executive director.

The organisers responsible for staging, W. Hayden Sparks and Kenneth St Germain, made good the promise to move a bit of the Everglades into Coconut Grove. High trees, water and swamp litter covered the centre of the main building. High wooden walkways made it possible to walk over this area and view the Everglades occupied, fortunately by taxidermists' samples, of snakes and alligators, as well as birds and small animals. The walkways gave a splendid overall look at the surrounding orchid exhibits.

Every display was aesthetically pleasing and many were quite novel in construction.

A display by several Dutch growers combined artfully-massed cymbidiums and other genera with the surrealistic effect of arching network. Gordon Cox's fine photos captures the atmosphere.

Nearby the Orchid Society of South-East Asia dramatised the theme "March comes in like a Singapore lion". It had flamboyance and colour which matched the Dutch exhibit. The background comprised panels of bronze-like mylar. It was fronted by a fierce *papier-mache* lion and two baby lions. Strong-coloured arandas, oncidiums, dendrobiums and vandas around them were reflected in the mylar.

The Japan Orchid Society exhibit had a tastefully-displayed range of genera including many charming botanicals. It indicated great promise for the 1987 Twelfth World Orchid Conference. The famous Japanese hybridisers of softcane dendrobiums, the Yamamoto Nursery, had a display which blazed with colour against a backdrop of snow-capped Mount Fuji.

Two displays showing Latin American influence used an interesting technique to create atmospheres of solidarity and substance.

One had all the pleasantness of an old Spanish abode winery with bottles, barrels and beams festooned with orchids. The walls were made from blocks of ultra-light polystyrene blocks plastered over with clay-coloured cement. The other was in the style of an ancient Mayan temple overgrown with a jungle of orchids and ferns.

The Trinidad Orchid Society captured the atmosphere of the Caribbean. A huge backdrop of painted mountain and lagoon was fronted by a sandy beach and a canoe with a rich cargo of mauve cattleyas.

There were dozens of such displays, including many from individuals. Also a whole alley of trade and nursery displays.

Australia was one of the southern hemisphere countries whose flowering season was out of phase. The South Africans did well by concentrating on their famous genus *Disa*. Several species of these magnificent terrestrials were well laid out in a setting of rocks, ferns and mosses.

New Zealand created a lot of interest with a mass of orchids around a Maori meeting house. This display had all the aura of the south seas.

Considering the seasonal difficulties in getting enough flowers the Australian exhibit was very creditable. Thanks are due to all who supplied

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ILLUSTRATIONS

Top: A number of Dutch growers joined forces to create this artistic display at Miami. Its size may be gauged from the people in the foreground.

Bottom: Just one aisle in the near hectare-size show. It gives an idea of the size of the building. Note the harmonising and unifying effect of the green carpet.

Photos by Gordon Cox.

flowers, those who packed and despatched them, and those who set it up.

One feature of the show which really complemented all the wonderful exhibits was the green carpeting of the pathways. This softened the strong lighting and had a unifying effect throughout the exhibition halls.

Three Australians won medals for individual plants. Master hybridiser Kevin McFarlane collected two gold, one silver and one bronze in medals, and in places, two firsts, three seconds and three thirds. All for dendrobiums. Of these twelve prizes ten were for plants of Kevin's own breeding.

Fred Alcorn gained a first and third for his lycastes and Harold Sheaves received a second also for a lycaste.

Judging was well organised. Nearly 300 judges took part in panels of six and seven people. The whole show was judged quickly and efficiently. However, an unusual procedure was adopted for choosing grand and reserve champions: each judge had to vote by secret ballot for anything in the whole show.

In spite of this wide field for choice the great majority voted for *Vanda* Deva 'Robert', AM/AOS, owned by Robert Fuchs of Homestead, Florida. The flowers were perfect for shape and colour but there was an unevenness in flower size ascending the spike. Reserve champion was a lycaste clone of the cross *Lycaste Sunrise* x *skinneri* from Santa Barbara Orchid Estate.

A rumour quickly spread that the owner of the champion had been offered $10,000 for it. He refused. However, he is offering flasks of seedlings with it as one parent for $US100.

For those who saw it, a rewarding show and its chief value for Australians is the ideas and knowledge participants brought back with them.

GOLD! GOLD! GOLD!

You saw a picture of the Australian exhibit at the Eleventh World Orchid Conference on the front of the June issue of AOR. It looked nice.

But in setting it up a series of minor but cumulative difficulties made the group setting it up, under the able direction of Barry Collins, feel that it was not as good as we would have liked it to be.

It didn't seem to be up to the same standard as the displays at our own shows. First, of course late February is the worst time of the year for flowers in Australia; far from the Spring flush and too early for Autumn and Winter flowers. However, our Australian growers rallied splendidly and some beautiful flowers were sent.

With transit delays and a few flowers that did not carry well we were left with little time and fewer flowers than we would have liked. Also except for a couple of boomerangs and some Aussie flags we were short on props. Fortunately our American friends helped out with some nicely-potted trees and a mound of sand.

Ian Chalmers and Gordon Lowndes acted as Barry's lieutenants and the rest of us acted as slaves. When finished it looked nice . . . creditable perhaps. But all those little set-backs made us feel it was not as good as some of the glorious exhibits around us. The feeling was that we had done our best but it was not good enough to win its class. We were grateful though for all the wonderful help from our fellow-Australian growers in sending their best available flowers. Grateful too to those who had collected, packed and despatched them.

The main thing, we thought, was that Australia was represented. As for winning anything . . . well, we would have to try harder in Tokyo. So apparently no participant bothered to check the exhibit-judging results.

The situation was complicated because gold medal awards exceeded the number of medals minted and a few gold-medal winners did not have them displayed with the exhibit or plant.

On August 7 your editor received a nice letter from Mary McQuerry, well known for her orchid books and who chaired the Editors and Writers Forum at Miami, together with a copy of *The Florida Orchidist*, and within, to our amazed gaze, was an illustration of the Australian exhibit and underneath it the caption: Australian Orchid Council. Best in 100 Sq. Ft. Cut Flowers. Gold Medal Certificate of Excellence (90 points).

Doesn't that go to show that you should not let a series of minor difficulties make you feel that you aren't doing so well!

TWO MORE GOLD

As mentioned elsewhere Kevin McFarlane won two gold medals for individual cut spikes. One was for *Dendrobium* Halo. This came from a plant of the cross *D.* Mini Girl x *D. williamsianum*. *D.* Mini Girl is a shapely hardcane-type and a sixth-generation grex. The other parent is a New Guinea species with nice round flowers, white with rose-pink centres.

Kevin's second gold went to *D.* Four Seasons, a cross of *D.* Approval and *D.* Hickham Deb. On the *D.* Approval side through Kevin's Impact and Ultimatum crosses to the PNG species *D. macrophyllum* and *D. atroviolaceum*. The other parent *D.* Hickham Deb comes from a long line of Hawaiian breeding.

Kevin gained ten other prizes for dendrobiums. Of the twelve, ten were his own breeding and one, *D. tangerinum*, a PNG species. Undoubtedly Australians can regard Kevin McFarlane as the world's outstanding dendrobium hybridist.

Conservation — State of the Art

A meeting of the International Orchid Commission during the Eleventh World Orchid Conference adopted a code whereby orchidists should adhere to the *Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).*

The preamble and extract below are self-explanatory:

Extract from the Proceedings of the International Orchid Commission (in the matter of the conservation of wild-occurring species).

Among much other business conducted at its Eighth Plenary Session held in Miami in March 1984, the International Orchid Commission approved and adopted a number of recommendations of its Conservation Committee which were set out in the form of a Code of Ethical Practice having bearing on problems arising from the application to orchids of the CITES regulations. It was resolved that these recommendations be given wide publicity in the world's orchid press at the earliest opportunity. To this end this extract has been distributed to a number of major orchid journals with invitation to publish: those to whom it has not been distributed are invited to copy:

"The International Orchid Commission recommends the following **Code of Ethical Practice** with regard to the trade in, and exploitation of, wild-collected orchid species:

1. That traders be encouraged to trade in **nursery-raised** plants of species of orchids.
2. That such nursery-raised orchid species be indicated **as such** in catalogues.
3. That nurseries in orchid-rich areas be encouraged to propagate species **from seed** and not rely on wild-collected plants.
4. That nurseries resist the temptation to import jungle-collected plants, especially where the species is —
   (a) known to be endangered in the wild
   (b) restricted to a country which prohibits wild-orchid exports by law.
   (c) restricted to National Parks or Reserves where collecting is forbidden.
5. That Travel firms or Tour organisers running orchid or botanical tours should state explicitly in their publicity literature that participants will not be allowed to return with plants collected from the wild.
6. That a world-wide network of orchid seed-banks be established; that the Royal Botanic Gardens, Kew be asked to co-ordinate such a scheme; that publicity be given to advertise the function of such seed-banks; that all orchid growers be encouraged to use the seed-banks as possible sources of seed of orchid species they wish to grow. This will involve new ways of co-operation between commercial and amateur growers, orchid societies and government institutions."

CITES AND COMMONWEALTH POWERS

Since May 1, 1984 the import and export of proclaimed endangered species has come under strict control. It is now necessary to apply to the Australian National Parks and Wildlife Service to import or export orchids. This is covered by the Wildlife Protection (Regulation of Exports and Imports) Act 1982, which implements CITES.

All affected orchids are listed on either Schedule 1 or Schedule 2 of the Act. Artificially-propagated cut flowers, tissue culture derived from Schedule 2 orchids, as well as orchid seeds, are exempt from controls and may be imported or exported without any documentation.

Application to import or export must be made on the appropriate form obtainable from the Australian National Parks and Wildlife Service, GPO Box 636, Canberra, ACT 2601.

Special provision for import or export by scientific bodies, herbaria and zoos is made in the legislation.

Schedule 1. It is virtually impossible for a private individual to import or export any orchid plants on Schedule 1 of the endangered-species list.

Orchids so listed are: *Cattleya skinneri, C. trianae, Didicea cunninghamii, Laelia jongheana, L. lobata, Lycaste virginalis* var. *alba, Peristeria elata, Renanthera imschootiana, Vanda coerulea.* The Australian Wildlife Service has the power to add to this list at any time.

Schedule 2. This schedule covers all Australian rare and threatened plants. There are 142 orchids on this list, mainly terrestrials, but including 17 dendrobiums, seven bulbophyllums, five sarcochilus and one vanda.

It will be seen that there is a great need for endangered and threatened species to be propagated from seed. Growers with these species are invited to supply seed to the Australian Orchid Foundation Seed Bank.

IMPLEMENTATION IN AUSTRALIA

Over 70 nations now subscribe to CITES, including Australia. The concept is splendid but the organisation still creaks a little. Many orchids are on the rare and endangered list because the collectors of yesterday forgot tomorrow. We are that tomorrow.

But how many customs officers could recognise an endangered species orchid? So countries which have adopted CITES play safe by blanket prohibition.

In the past too, protection has been confused by different policies by different government departments, and between the different States.

Moves allowing collection from felled trees and from private property have been abused by a few anxious to make a fast dollar, but who have no notions of culture. Policing has been a problem.

West Australia possibly has the best laws on conservation of flora. There, even private land with a rare species can be declared a reserved area, subject to compensation for the owner.

The NSW National Parks and Wildlife Service is seeking the same type of protection.

Moves are in hand to achieve uniform Australia-wide legislation, thus closing loopholes where orchids are moved between States. Queensland for instance does not control collection from private land.

Licensing of retail outlets and other controls will soon be a reality.

The NSW Wildlife Service has no wish to discourage interest in growing native flora. To satisfy this demand the Service emphasis, through appropriate regulations, is on encouraging nurseries to grow from seed. Hobby growers will benefit because they will be buying established seedlings or mature plants and that will no doubt be cheaper than driving hundreds of miles to a bush area.

Currently a NSW Forestry Commission local officer has the power to issue a permit to collect if orchids would not otherwise survive. For example, in a burn-off. A fee is payable. The Commission also sends orchids from felled trees to its resale centres at Pennant Hills and Muswellbrook and hobbyists are recommended to these outlets.

Natives from Seed. In Australia there are several excellent nurseries growing natives from seed, both species and hybrids. This propagation is resulting in flowers which are a big improvement on any likely to be obtained by chance collection in the bush. In Queensland Ted Gregory of Mt Tamborine specialises in this field. So does Ken Russell at Dungog and "Double U" Orchids at Elanora Heights, both in NSW. In Melbourne there is Nindethana Orchids. Other excellent nurseries sometimes advertise seed-grown natives.

These seedling raisers use selected parents so the chance of obtaining really good clones among the seedlings is greatly enhanced.

In future under the heading *Catalogues received* AOR will mention whether native species seedlings are listed.

AOF CONSERVATION

The Australian Orchid Foundation has funded conservation projects for many years. It has provided money to fence rare orchid areas, helped work on seed-raising research at Canberra Botanic Gardens, assisted expeditions engaged in assessing orchid populations in remote areas, and acted to distribute species seed.

Now the Foundation has agreed to sponsor a plan to provide rare and endangered species in mini-flasks. The availability of these flasks will be published in AOR from time to time, together with details of natural environment and culture. The first batch of these flasks will be announced in the December issue.

Currumbin Sanctuary Project

The Gold Coast Orchid Society reports solid progress with this splendid orchid conservation project. Details of the first stage were reported in the December 1983 issue of AOR.

The octagonal shadehouse is now all but completed. The outer frame was both supplied and erected by The National Trust (Queensland). The shadecloth (supplied by the Australian Orchid Foundation) and protective wire for the sides and roof (supplied by the National Trust (Queensland) were erected by members of The Gold Coast Orchid Society. The blue-metal screenings (supplied by The National Trust) were spread over the floor by the members. Many thanks to them.

Quite a number of native orchids have been received and more have been promised. Many thanks to those interested parties at Green Mountain, Upper Tallebudgera Creek, Chillingham (NSW), Woodridge, Brisbane and Ipswich.

The Gold Coast City Council, through alderman Mrs Betty Diamond, has agreed to both supply and deliver the rocks required for the internal landscaping. Many thanks to the Gold Coast City Council.

The Sanctuary is famous for its birds. Members of the Gold Coast Orchid Society have placed hundreds of native orchids there under protected conditions and many of these will be in flower this Spring. Donations of Australian species will be welcome. Contact Mr J.W. Bailes, 3 Jabiru Avenue, Burleigh Heads, Queensland 4220.

"Orchids occupy a very prominent role in Australia's floral heritage. They are also, after Myrtaceae and Proteaceae, one of the major threatened groups in Australia, with 154 species endangered, vulnerable, or otherwise of concern (Hartley and Leigh, 1979)." — *Prof. Edward S. Ayensu.*

AUSTRALIAN ORCHID FOUNDATION

Seed Bank Success

About 2,000 samples are distributed each year through the Australian Orchid Foundation Seed Bank. Seed comes from many Australian donors, and from interested persons in South, North and Central America.

The concept has been taken up at Kew and other centres.

Graeme Banks has been curator of the Seed Bank for three years now. He reports having seen many seedlings around from seed supplied through the Bank.

Seed available now includes many rare species. Donations of species on the endangered plants list will be sure of going to experienced raisers. So if you have anything rare and endangered please save it for the AOF Seed Bank.

Disa uniflora seed will be available shortly at $2.50 per sample. This will be in short supply so it is advisable to order immediately.

Seed Bank Stock — Spring 1984

Subject to its availability, following seed can be supplied by the Seed Bank. Cost is $1 for first sample and 50 cents for each additional. Currency is Australian dollars. Orders for seed should be sent to the Seed Bank curator, Mr Graeme Banks, 183 Windsor Road, Northmead, NSW, Australia 2152.

Persons ordering are requested to list alternates in case some supplies are depleted. Alternatively, it can be left to the curator to substitute.

Note: The genus name is in italics, the roman typeface names following are species of that genus.

AUSTRALIAN SPECIES

Caladenia carnea, gracilis, patersonii, catenata, cairnsiana, nuda, marginata, dilatata, filamentosa, hirta, nana, flava, integra, huegelii, gemmata, latifolia.

Calochilus campestris, robertsonii, paludosus.

Cryptostlis erecta.

Chiloglottis reflexa.

Cymbidium canaliculatum, madidum, suave.

Eriochilus cucullatus.

Diuris maculata, longifolia, punctata, emarginata, laxiflora.

Dendrobium aemulum, bigibbum, dicuphum, discolor, kingianum, speciosum, mortii, teretifolium, gracilicaule, linguiforme, falcorostrum, tetragonum, monophyllum, striolatum, bairdianum, fleckeri, agrostophyllum, adae, racemosum.

Pterostylis obtusa, recurva, foliata, cucullata, plumosa, longifolia, furcata.

Sarcochilus hartmannii, falcatus, olivaceus.

Prassophyllum fimbria, ovale, regium, elatum, odoratum, patens, brownii.

Thelymitra holmesii, ixiodes, flexuosa, spiralis, pauciflora, villosa, fuscolutea, rubra, aristat, nuda, mucida, carnea.

EXOTIC SPECIES

Aerides multiflora, japomicum. *Angraecum* eburneum. *Ansellia* africana. *Anguloa* clowesii. *Ascocentrum* miniatum. *Barlia* longibracteata. *Bletilla* striata, formosana. *Brassavola* glauca. *Calanthe* discolor. *Cirropetalum* robustum. *Coryanthes* maculata. *Cymbidium* gyokuchin, giganteum, aloifolium. *Clowesia* thylaciochila.

Cattleya guttata, amethyoglossa, bicolor, intermedia, bowringiana.

Dendrobium gouldii, conanthum, helix, stratiotes, lineale, williamsonianum, nobile, farmeri, deareanum, tapiniense, heterocarpum nindii, macrophyllum, veratrifolium, chrysanthum, spectasissimum, unicum, infundibulum, spectabile, moschatum, sancristobalense, macranthum, formosum.

Encyclia mariae vitellina, guatemalensis, varicosa.

Epidendrum radicans, fragrans, paniculatum. *Eulophia* alta, englossa, parreana, borealis, streptopetals, gravinifolia, latilabris.

Govenia mutica. *Huntleya* meleagris. *Habenaria* ciliaris. *Miltonia* candida. *Osmoglossum* pulchellum. *Orchis* militaris, sancta. *Sarcochilus* japonicus. *Saccalabiopsis* armitii. *Schomburgkia* tibicinis, crispa, superbeins. *Sobralia* zantholeuca. *Spiranthes* chloraeformis. *Zygopetalum* mackayi, crinitum.

Comparetia coccinea. *Odontoglossum* cervantesii.

Orchids Australia '86

South Australia is losing no time in organising for what will be a truly great conference.

Affiliated societies are now undertaking fundraising activities on a massive scale. A working committee under John Harris has been planning for a year now, and many sub-committees have been formed.

This 1986 Australian Orchid Conference is planned as an international orchid show. It will be held over September 17-24 inclusive.

Orchids Australia '86 was well promoted at Miami by a South Australian team headed by Syd Monkhouse. A function room was maintained where visitors could call, sample Aussie wine and learn about South Australia.

In September '86 the South Australian 150th Jubilee celebrations will be taking place so there will be plenty to interest visitors. Jot the dates down now in your diary.

SHOWS

ANOS Warringah Group. TENTH SPRING SHOW. Mona Vale Memorial Hall, Pittwater Road, Mona Vale. Fri, Sept 7, noon-10 pm, 8th 9-9, 9th 10-4. Marshal: C. Arnott, phone 98 9173.

ANOS Bass Group. FIRST SPRING SHOW. Set up and judging September 28. Public all day Saturday, September 29. For venue contact Gwen Smith, RD 793, Kindred 7310.

Five Dock RSL OS. SPRING. Birkenhead Point Shopping Centre. Thurs, Sept 27 to Oct 1. Shop hours. Sec: Mrs K. Jones, phone 713 8124.

Hastings River OS. SPRING. CWA Hall, High Street, Wauchope. Sept 21 and 22. Sec: Mrs J. Lester, PO Box 183, Wauchope 2446. Phone (065) 85 1502.



Rare Species for Kew

Patricia and Ian Walters with part of the consignment of 48 flasks sent to Kew Gardens. The 48 flasks covered 16 genera from 19 countries and the species are ones Kew does not have in cultivation.

Although Kew Gardens would have possibly the widest range of species to be found in one collection a programme to broaden it still further is now under way.

The gift of flasks resulted when Ian met Dr Phillip Cribb of Kew in Townsville last year.

Inspired by the Australian Orchid Foundation Seed Bank operation Kew has commenced a programme of making orchid seed available to other gardens throughout the world.

Most of the species sent are on the rare and endangered species list.

Ian said that he was pleased to send the seedling flasks as a gift because he is an ardent conservationist. He hopes, however, that Kew may sometime return the compliment.

The AOF is to sponsor a plan to make flasks of rare and endangered species available. AOR will publish cultural details. The first batch of mini-flasks, each of twelve plants, will be announced in the December issue.

A WRONG SUSIE

DR G.J. WILLIAMS

At the Tropical Queensland Orchid Council Conference held in Mackay, June 1983, I spoke on aspects of hybridising and made the point that registration of orchid hybrids is (or should be) an inescapable responsibility of hybridisers. If one is into interfering with flowers, one shouldn't leave a trail of illegitimate off-springs. Not to register your hybrids is bad enough, but to give the off-spring of the cross a name without registering it is fraught with danger. Two examples I quoted were *Dendrobium* Susie Wong and *D.* Paradise Pearl. Both these orchids were distributed about ten years ago but have not been registered. Hybrids of these two dendrobiums have also been distributed. Imagine the confusion if these names were used in the registration of some other cross.

Well, it has now happened with the result that there are many incorrectly-labelled plants in Australian and possibly other collections. The Australian-produced 'Susie Wong' is a dark purple, full shaped, phalaenanthe dendrobium, with parents *Den.* Frank Simpson x (Ong Teng Cheng x Saw Kim Swan).

In the *Orchid Review* of October 1983 we see registered the cross *Den.* Susie Wong with parents *D.* Spellbound x *D. bigibbum.* This would not be expected to give flowers as described above. In future registrations of hybrids of Susie Wong can we be sure of the integrity of the cross? If registrations are to be a reliable, scientific reference work with the dedication of caring hybridisers, then we must learn from this most unfortunate happening.

Over the years I had repeatedly pointed out to dendrobium hybridisers and growers that the above-mentioned names were not registered. I am not surprised that many people did not believe me (could hundreds of labels all be wrong?).

As of the March 1984 *Orchid Review Den.* Paradise Pearl has not been registered. The plants circulating in Australia under this name are *D.* White Maiden x *D. phalaenopsis,* a large, full-shaped bicolour dendrobium. I understand that registration of Paradise Pearl is proceeding.

It is to be hoped that hybridisers using the Australian 'Susie Wong' don't register their hybrids under this name and that this very beautiful Australian orchid and fine parent finds its own legitimate name.

Two other problem areas in dendrobium nomenclature in Australia are the names Ted Takiguchi and Roy Anderson.

The illegitimate 'Susie' has one illegitimate parent. The pod parent was *D.* Frank Simpson which is from the cross *D.* Helen Fukumura x *D.* Lady Hay registered by Mr C. Simpson of East Ipswich in 1973. Originator of this cross is unknown. The other parent is from the cross *D.* Ong Jeng Chen x *D.* Saw Kirn Swan.

Pending efforts to register this illegitimate cross growers who have it in their possession should mark their labels NOT Susie Wong or registration pending.

Exhibitors are warned that plants benched under this name will be subject to scrutiny. If presented for awards proof of parentage may be required. *Editor.*

A number of crosses carrying these names came to Australian from Thailand. I am told by distributors in Thailand that they are Theodore Takiguchi (no real surprise) and Lois Anderson which one would not have guessed. What does worry me is that it appears that a number of people have settled for *D.* Roy Anderson. I am told that the Thai pronunciation of Lois is between Loy and Roy.

There is a *Dendrobium* Roy (May Neal x Aina Haina) which I would expect to be yellow/green. The parents of *D.* Roy have been used in this area of breeding. The crosses I imported were: Roy Anderson x Darcie Mikami and Roy Anderson x Louis Bleriot which I am assured are Lois Anderson crosses. *Den.* Lois Anderson is from *D.* Hawaii Nut x *D. phalaenopsis,* a cross registered by O. Kirsch in 1947.

I hope that the above information might help in some way in avoiding similar problems, clear up some confusion and encourage people to accept responsibility for their work.

87 Rice Street, Rockhampton North 4701

MOUNT GAMBIER'S SEMINAR

The town of Mount Gambier is centred in one of the most interesting parts of Australia. Unique geological features (it was volcanically active only ten thousand years ago), the mysterious Blue Lake and nearby areas of vast reafforestation make it well worth a visit.

Mount Gambier has a very active orchid society and members, although remote from Adelaide, are by no means insular in outlook.

On July 21 they held a seminar and had OCSA president Syd Monkhouse down to conduct it. The quality of instruction and discussion was of great benefit to all attending. Members of the western-Victorian Ararat and Hamilton Orchid Societies were present, making the seminar quite a social occasion.

Wonderful *Sarcochilus hartmannii* 'Blue Nob'

DONOVAN LINNEY

I write on a matter of some importance to all conservation-minded orchid enthusiasts. It concerns the rapid disappearance of one of Australia's orchid gems, *Sarcochilus hartmannii*, and in particular the form 'Blue Nob'.

Here in the Tweed Valley in northern New South Wales we are blessed with many species of native orchids but few, if any, have come as close to the point of extinction in their natural habitat as *Sarc. hartmannii* 'Blue Nob'.

I fell in love with this beautiful lithophytic orchid when, about six years ago, I was given a small division of the plant by my good friend, local orchid grower, Colin Gorrell of Doon Doon. At the time I was living on a farm at the base of Blue Nob in the Nightcap Ranges just south of Murwillumbah. Being a keen bushwalker and native plant enthusiast, I spent a lot of time walking the Nightcap Ranges and Blue Nob in particular, collecting seed of rainforest trees. On these trips I would sometimes come across plants of *S. hartmannii* — not many — but a few, tucked away on inaccessible cliff faces, where they would compete for root space and nutrients with clumps of kangaroo grass and a native lily, *Bulbine bulbosa*. I considered their inconspicuousness when not in flower to be their saving grace against plant thieves.

I left the Blue Nob area five years ago and moved some fifteen miles away to Mt Warning, so in October last Colin Gorrell and I made a return visit to Blue Nob to photograph *S. hartmannii* 'Blue Nob' in flower in its natural habitat. It grows in a very restricted area at about 700 metres on cliff faces with a northerly aspect. It clings tenaciously to small rock ledges, sending out its roots into cracks and crevices filled with accumulated decaying matter. Although the roots are constantly moist during the rainy season from Christmas to June, they are never waterlogged. The plants' exposed position and the sheerness of the cliffs make sure of this. During the normally dry winter period the plants enter a rest phase but are kept in good condition by an early-morning saturation of moisture-laden air rising from the evaporating mists in the valleys below.

Upon reaching the cliffs of Blue Nob, itself an arduous task, on our October excursion we were shocked and deeply saddened to discover that all but two of the plants previously known to us had disappeared. The two remaining ones were left only because they defied attempts to poke them down with a long pole obviously cut from the rainforest on top of the cliffs and left lying on a ledge below the orchids by the unscrupulous people involved. The way the stocky and at times extensive root system of this orchid finds its way into nooks and crannies almost guarantees that any attempt to dislodge the plant will result in the destruction of most of the root system and, more often than not, the plant.

I was very pleased therefore, to hear that late last year the State Government declared Blue Nob as part of the Nightcap National Park, thus hopefully, preserving the last few remaining clones of *Sarcochilus hartmannii* 'Blue Nob'.

I have enclosed a photograph of a specimen plant of *Sarcochilus hartmannii* 'Blue Nob' that I grew from the original four leads given to me six years ago by Mr Gorrell. The plant is growing in a clay pot, 200 mm wide by 250 mm deep, in fist-sized chunks of pine bark and charcoal, a mix it has been in undisturbed for the past three years. This growing medium allows plenty of air circulation and room for the thick and vigorous root system to grow, while the clay pot ensures rapid drainage and a cool root environment similar to that encountered in the natural habitat.

I grow the plant on a mesh bench under 50 per cent shadecloth during the growing season, watering early in the morning and feeding with weak solutions of soluble fertilizer. Since Bill Johnson's articles (Australian Orchid Review, Vol. 47 No. 2) I have been using his fertilizer programme with excellent results.

About July or towards the end of the active growth period, I move the plant under a fibreglass roof on the northern end of my shadehouse to give it more light during the less-intense winter months. Watering at this stage is reduced to soaking once a week and light mistings whenever necessary to keep the plant in good condition.

After flowering it is returned to the shadehouse for another growth season. Air movement is important at all times with this plant as in nature it enjoys copious amounts of fresh air at its altitude. Even on a seemingly-hot, still day, plants on the cliffs receive air movement in the warm updraughts from the valleys below. The plant in the photograph had 98 flower spikes bearing an average of 15 flowers per spike.

Mt Warning Nursery, C/- PO Uki, NSW 2484

Cymbidium ensifolium and *Dendrobium moniliforme* were described in a Chinese manuscript written by Ki Han, Minister of State under the Emperor Hui Ti about the year 300 BC.

CORAL ILLUSION 'TOYA', AM/AOS

(Sabre Dance x Doris Aurea)

Coral Illusion 'Toya' was named Cymbidium of the year by the CSA in 1980. It was the best cymbidium shown in the world during the 1980 flowering season. A sure-fire winner whether showing or breeding.



When awarded, the spike carried 22 blooms that measured 12.7 cm in overall width; 4.2 cm petals and 5 cm sepals. One of the finest brown cymbidiums yet seen, this fine diploid will no doubt be an outstanding parent of the future.

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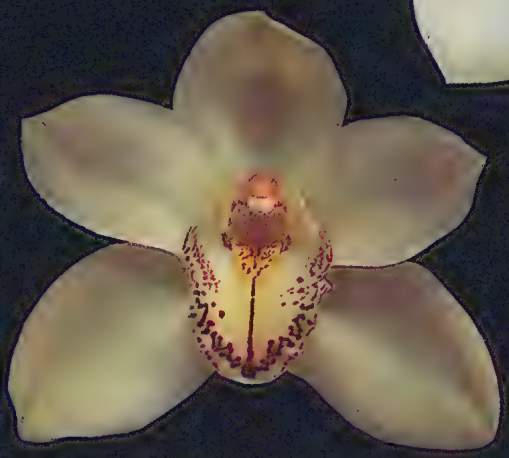
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WINTER FAIR x
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(SNOW EAGLE x LUNAGRAD)
'DESTINY'



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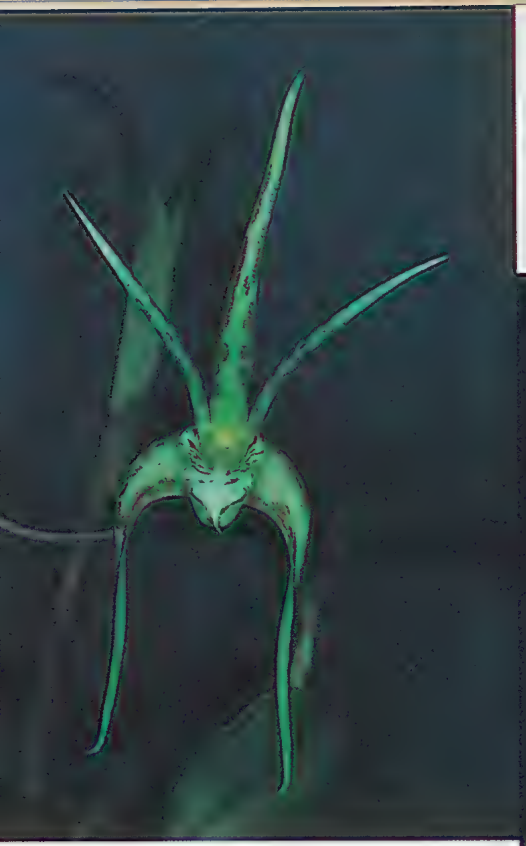


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'PINK SURPRISE'

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< *The clone flowers in September. A minimum number must be met before its release.*

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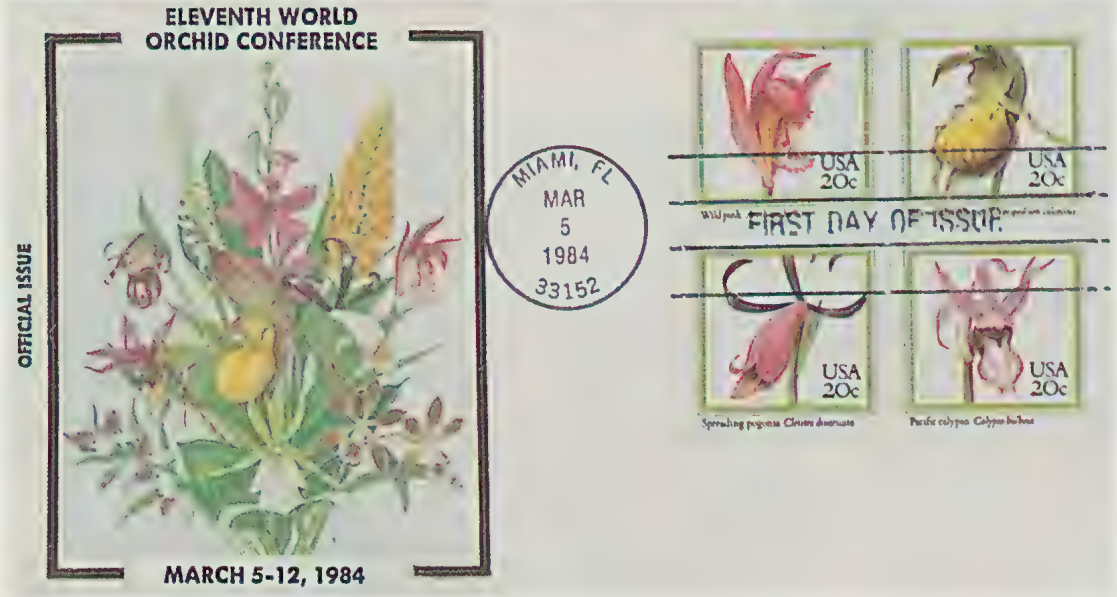
Watch for these to appear in colour in the not-too-distant future; Logfire 'Red Beauty' (4N), Winter Fire 'Matthew' (4N) and Chocolada 'Orange Delight' (4N).



< ***Sarcochilus falcatus* R.Br.**

This is the type species for the genus *Sarcochilus*. Peter Adams covers its history in this issue. These plants were grown by the late Len Archer on a hanging cement pot.

Photo: R. Kerr.





^ **Eleventh World Orchid Conference**
First Day Cover

A meeting of orchid philatelists took place at the Miami Conference. Formation of the International Orchid Stamp Club was widely acclaimed. For enquiries re this club contact the secretary, Mrs M. Chalmers, 25 Turriell Point Road, Caringbah, NSW, Australia 2229.

< **Under the Mango Tree**

Part of the clever display at the Townsville Eighth Australian Orchid Conference Show last year. This display caused much favourable comment and won its class. It was set up by Mr Bob Mayoh with the help of his fiancee Miss J. Real. The show results published in AOR wrongly attributed this display to someone else. With co-operation like this Bob and his future wife will have many years of happy orchid growing ahead.

Photo: B. Mayoh.

A SIMPLE LIQUID NUTRITIONAL PROGRAMME FOR ORCHIDS

W.R. JOHNSON

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In June 1982 AOR published an outline of nutritional experiments carried out by Mr W. (Bill) Johnson of Glenwood Orchids. These were based on his own conclusions and on research by Dr H.A. Poole and Professor J.G. Seeley in America.

These findings are largely confirmed in a paper by Dr Poole and Professor Thomas J. Sheehan published in *Orchid Biology — Reviews and Perspectives II*, edited by Professor J. Arditti.

Mr Johnson, with the welfare of the Australian Orchid Foundation at heart, proposed that a full report of his findings on nutrition would be made available to anyone contributing three 30¢ stamps (or more) to the Foundation. This has resulted in contributions to the Foundation exceeding $1,000, an indication of the great interest in orchid nutrition, and also of the wide circulation of AOR.

Your editor has spoken to growers who have used this nutritional programme over the last two years and they have expressed satisfaction with the results.

Bill Johnson has worked out the practical application of basic nutritional research in a fashion capable of being applied by anyone. This will not be the last to be said on orchid nutrition but it establishes a more scientific approach than has previously been the case.

Those growers who contributed to Australian Orchid Foundation Funds have had a year or more start in applying its methods. In this issue it becomes available for the benefit of all.

While all the essentials in Mr Johnson's original paper are preserved this is a complete re-writing incorporating the results of additional testing.

Unlike most forms of horticulture the orchid grower has absolute control over his plants, therefore if anything is wrong, it is the grower who is to blame, or, his choice of methods and materials used for growing the orchids.

The information circulating on orchid culture is so varied and conflicting that it suggested to me something should be done to quantify all the factors that governed orchid growth and flowering.

Until it was possible to quantify nutrition, water, light, temperature and potting mixtures, it was impossible to make any logical conclusions as to what improved or impeded growth and flower production.

So, in 1978 I began a study on all aspects of orchid culture with the backing of Glenwood Orchids Pty Ltd and Kapena Pty Ltd (via their Kapena Orchids division). This gave me the range of orchids and a range of plant sizes on which I could run trials.

The outcome of this study is that we now know that potting mixtures and proper nutrition are very important co-factors in producing optimum growth and flower production. What follows is how that study was conducted, why the recommendations are made, and what is required of growers to make up a **simple liquid nutritional programme** for orchids.

Initially the criteria laid down by Glenwood Orchids, for their support, was that if the results were to be passed on to their clients the recommendations had to be: (1) simple, (2) easily prepared without expensive equipment, and (3) the materials required very readily available.

(Item 3 was essential, otherwise there would be no point passing on any relevant data).

The basic study spanned four years and the results were so successful that the final recommendations were adopted by both Glenwood Orchids Pty Ltd and Kapena Orchids (and other commercial growers) for their plant-nutrition programme.

Before we were half-way through the testing a scientific paper on orchid nutrition was published by two scientists from Cornel University (USA) named Poole and Seeley. This test was not noticed by the local press because it was not reviewed, but it was probably the most important study to be undertaken in the last 25 years. The Poole and Seeley study showed there was a specific relationship between growth in orchids and the proportions of the chemical elements N, P, K and mg, and if those proportions were slightly out then growth would be inhibited.

What Do Orchids Need for Food? The very first question that had to be answered before the tests could be undertaken, was what precisely do plants, and in particular, orchids require for growth to occur.

Research showed that the chemical elements required by plants was basically the same no matter what the plant was. These elements are:—

Nitrogen (N), Phosphorus (P), Potassium (K), Magnesium (Mg), Iron (Fe), Calcium (Ca), Sulphur (S), Boron (B), Molybdenum (Mo), Zinc (Zn),

Copper (Cu), Manganese (Mn), Chlorine (Cl), Carbon (C), Oxygen (O), Hydrogen (H) and possibly Cobalt (Co), Iodine (I) and Sodium (Na).

The initials in brackets after each of the elements are the standard scientific symbols for those elements and those initials will be used from here on.

What I was to discover is that all plants have a different diet preference if the best-quality growth was to be produced, and orchids were no exception.

One important factor which had to be considered was that few of the exotic orchids grow in soil, instead they are epiphytic (growing on trees), or lithophytic (growing on rocks). This being so, it was likely that their requirements would be different from something which grew in soil, and so testing should show that difference.

During the early stages of the tests it was profoundly obvious that no orchids will grow if its roots are imperfect or dead. We found that the compost commonly being recommended usually produced dead or rotting roots very quickly from excess water retention and lack of aeration.

This added another dimension to the study because no conclusive answer could be found if poor root systems affected the outcome. So began a study to find a compost that would give perfect, healthy roots. After all, if roots were perfect and the growth rate inadequate the results would tend to indicate that it was only the fertilizer which was imperfect.

Those tests showed two things. Firstly, the mixture had to be very open and aerated, and contain no fine material, and secondly, pots larger than those being recommended should be used to make extra space available to a rapidly-growing plant and a larger root system. We also saw evidence that hardwood charcoal[1] was an important ingredient in the compost.

The mixture formulated for the tests is as follows:—

Pine bark (5 to 10 mm) 4 parts, charcoal (4 to 6 mm) 3 parts, composted peanut shell 2 parts, rice hulls 2 parts.

The Testing. It was decided that only the commonly-available fertilizer products would be tested, to see what they contributed. Their contents were catalogued and the percentage of each chemical element calculated. (See Table No. 1). It was most important that this be done because later we could relate the best growth rate to a specific volume of chemical elements.

We purchased a quantity of the following:—

Magamp, Nitrosol, Osmocote, Maxicrop, Fish Emulsion, Trygon Field Pack fertilizer, Aquasol, Yates Thrive and Yates Balanced Orchid Food.

The testing was conducted in two parts. The first part, or preliminary test was designed to show the effects of each fertilizer when used as each manufacturer recommended. It was also designed to eliminate those fertilizers which gave unsatisfactory results.

All plants were repotted into fresh potting mix. All consisted of a bulb and new lead. They were then fed the various fertilizers at the manufacturer's recommended dilution rate once every week.

After six months those fertilizers which produced no response or the least response were eliminated from the testing. If an orchid does not respond to fertilizers within three months in some way or other, that fertilizer is of no value, so six months was considered a more than adequate minimum trial period.

After nine months those remaining samples showing that least responses were gradually transferred to the fertilizers producing the best results to check if it was indeed the fertilizer, and within a short time they too showed improved growth rates.

This showed that plants will respond to correct fertilizer formulation within a short time. Depending upon the weather conditions, and the time of year, this response could be as short as one week.

Those samples showing best response rates were maintained on their programme for a year.

Eventually it was noted that the most promising but not ideal results came from Aquasol.

Preliminary tests indicated that Yates Thrive gave the fastest growth rate, but the tissue was almost white — showing not chlorophyll production — obviously from lack of sufficient iron and/or magnesium.

The second phase, or *Modification Test,* was begun with a group of cymbidium seedlings from three crossings, one a miniature. These were repotted into 200 mm pots and placed in various positions in a greenhouse.

This time all were fed a diluted solution of one gram of Aquasol in one litre of water every five days. At first no additional material was given. The vegetative growth rate increased, and the new leaf tissue was showing a tendency to being pale green and a little soft.

Mg and Fe levels were then gradually increased until all new tissue was green and firm, then the Mg and/or the Fe was gradually reduced until the white tissue reappeared.

The upper level of Mg and Fe giving best leaf colour was noted, and an amount just below that level was added to all further applications of the Aquasol for two months. The tissue became green and firm and remained that way. Growth rate was satisfactory.

Next the levels of N, Mg and Fe were eventually determined and thereafter maintained for the remainder of the test period.

The level of N, P, K, Mg and Fe which gave the best result was: N — 100 ppm; P — 20 ppm; K — 75 ppm; Mg — 25 ppm; Fe — 8-10 ppm.

Magnesium sulphate was the source used for Mg and Hortico's Chelated Iron was the source of Fe.

Growth response was immediate after applying the first feeding, and from then on remarkable. In eight months all but one plant of the Rincon x Miretta group produced leads which had reached 850 mm (34") and by the end of February 1982 several of the plants were showing evidence of flowering spikes. Many had two new leads of equal size and some units consisted of a very small bulb and one very large lead. It was apparent that the size of the first bulb formed had no bearing on the size of the next.

Of all the plants tested NOT ONE showed even the slightest sign of leaf-tip necrosis, and every plant was exhibiting signs of excellent growth — no limp leaves, no white-spot growths, etc — the leaves were all thick and dark green.

DISCUSSION ON THE RESULTS

By August 1981 it had become so obvious that the result of the test would be most satisfactory, that Glenwood Orchids Pty Ltd and Kapena Orchids commenced using the liquid fertilizer formulation for their entire stocks with the same excellent results. From then on the testing became a very large-scale test.

The same fertilizer is now used by Glenwood Orchids and Kapena Orchids on all genera grown, including cymbidiums, vandas, cattleyas, oncidiums, encyclias, paphiopedilums, phalaenopsis, native dendrobiums, lycaste, zygopetalums, hardcane dendrobiums, softcane dendrobiums and a few miscellaneous genera.

If one considers that the strength of the fertilizer is very weak by any standard for normal plants, the growth rate achieved was remarkable. The results highlighted the fact that good growth rate does not depend on strong fertilizers but on precisely-balanced formulation instead.

This is probably best illustrated by comparing it to a motor-car engine that is very well tuned. Obviously the engine that is well tuned will give more miles per gallon.

In an attempt to prove or disprove the results of our tests, we fed a group of plants showing no growth aberrations one feeding of Yates Thrive which had not been rebalanced, at one-third the recommended dilution rate.

If our conclusions were correct the predicted results would be soft, limp and pale greenish/white fresh growth within seven days.

This is precisely what happened, and by calculating the amount by which Mg and Fe were deficient, and then applying that amount, the growth aberrations were corrected very quickly.

In this test one hardcane dendrobium, *D. thyrsiflorum* grew four inches in the week after being fed the Thrive, and the new leaves were very pale, while the stem of the cane was soft and limp. This condition also appeared in a number of genera at the same time and we took action to correct it. We doubled the Mg and Fe in the next feeding, and the abnormal symptoms began to disappear and the tissue quickly returned to normal.

These tests were terminated in March 1982 after spikes began to appear on plants from each test batch. The preliminary tests, which saw flowering results in 1981, indicated that flower count and size would be increased. In fact some of the plants used in the preliminary testing produced spikes from the backbulbs, so good was the response.

Initially the sole purpose of this test was to devise a liquid fertilizer which could be prepared by the simplest means, and which would give excellent results. We have achieved exactly that, and we now know precisely what, and in what proportions nutritional elements should be fed to our orchids.

This study produced a number of interesting answers, some of which were not being sought. From a nutritional point of view the following were confirmed:—

1. That orchids do NOT require strong fertilizers, instead a weak but well-balanced liquid chemical fertilizer will produce optimum growth rate if applied every four or five days.
2. It has been shown that the "balancing" of the fertilizer is of extreme importance and that the Poole and Seeley figures are valid, with the exception that chelated iron should be used instead of normal iron sulphate, and more than the 3 ppm they tested (possibly because of our strong sunlight).
3. Leaf-tip necrosis IS a nutritional (and a compost) problem and NOT caused by fungus attacking healthy tissue.
4. That a very open and aerated mixture is an important factor in the creation of a healthy root system, which in turn will supply adequate nutrition and water to the plant's extremities.
5. Larger pots, and not the gradual and regular increase in pot size, is important for rapid-growth rate. Pot-bound plants will not give satisfactory growth rate because insufficient water is retained in the pot.

A number of other observations were made which caused us to make further studies which will be reported on, in the future.

The fertilizer programme we can now recommend as being the best and easiest to rebalance is Hortico's Aquasol. We selected that

TABLE 1

COMPARISON OF CHEMICAL ELEMENT PROPORTIONS IN VARIOUS COMMERCIAL FERTILISERS

(Expressed as parts per million (ppm) at recommended dilutions)

CHEMICAL ELEMENT SYMBOL	AQUASOL	TRYGON FIELD PACK	MAXICROP (1)	YATES BALANCED ORCHID FOOD	YATES THRIVE	CHEMICAL ELEMENT REQUIREMENTS FOR ORCHIDS SPECIFIED AS PARTS PER MILLION (ppm) for: (A) CYMBIDIUMS	(B) CATTLEYAS
N	230.0	7.8	3.0	775.0	655.0	100.0	50.0
P	40.0	1.2	0.6	114.0	96.5	20.0	20.0
K	180.0	2.3	6.6	218.0	184.0	75.0	50.0
Mg	1.65	1.0	—	3.0	2.53	25.0	50.0
Fe	0.6	0.35	1.05	0.15	—	10.0 (2)	10.0
Ca	—	0.68	0.66	—	—	200.0 (3)	200.0
Mn	1.5	0.68	—	1.0	0.84	1.0	1.0
Cu	0.6	0.34	—	0.125	0.105	0.025	0.025
Zn	0.5	0.034	0.0192	0.05	0.41	0.2	0.2
B	0.11	0.14	—	0.125	0.105	0.025	0.025
Mo	0.013	0.085	—	0.05	0.042	0.001	0.001
S	0.4	—	0.45	1.6	1.35	10.0	10.0
I	—	—	2.94	—	—	1.0 (4)	1.0
Cl	—	—	—	—	—	10.0 (5)	10.0
Na	—	—	—	—	—	10.0 (6)	10.0

NOTES: (1) Maxicrop. The figures quoted may be inaccurate. The manufacture does not specify the element content of the product. In most cases they state only the element content of seaweed. (3) (4) (5) (6) These figures are our adjustment to Poole & Seeley's figures as a result of testing. Na may not be absolutely necessary if potassium supply is adequate. Cl content may be higher but advantage is doubtful. (2). Calcium content may be lower if water supply contains good levels of Ca. Figures in Column (A) and (B) are based on the Poole and Seeley study but with certain modifications, as specified. The study fully conducted by Poole and Seeley should be read. It was published in The Orchid Advocate (USA) in July-August issue 1979, pages 127-133, and in AOR, March 1984.

over Yates Thrive, only because it is easier for the completely-inexperienced grower to prepare, whereas Thrive is more complicated.

> Other products, if rebalanced, or reformulated could be just as good, it is just a matter of having the correct analysis and the means of recalculating the modifications.

As part of our study we devised a system which will allow the fertilizer to be prepared with the simplest equipment, namely just a Hortico 5 ml spoon and a simple cheap liquid measure. **(Note: Initially the spoon supplied was a 5 ml spoon, but this was later changed to a round 10 ml spoon — the spoon supplied with their chelated iron spoon is still 5 ml).**

Rebalancing Aquasol. The rebalancing method is explained in steps as follows:—

Step One: Make a concentrated solution of magnesium sulphate as follows:

Using the 5 ml spoon measure out two level spoonfuls (or one 10 ml spoonful) and dissolve this in 900 ml of water, when dissolved add further water to make up to ONE LITRE.

Label bottle: Solution "A" — Magnesium Sulphate.

Step Two: Make up a concentrated solution of Hortico's Chelated Iron:

Using the same 5 ml spoon, measure one packed, level spoonful of the iron powder and dissolve this in one litre of water. Place the solution in a bottle and label it:—

Solution "B" — Chelated Iron.

Step Three: Make up the required volume of diluted Aquasol solution to be supplied to plants, select the dilution rate to be used from Table 2 (eg Dilution Rate "A" or "B"), by dissolving the required amount of Aquasol per litre or water.

The (original) 5 ml spoon supplied with the Aquasol powder held four grams if the powder was pressed lightly into the spoon and then scraped level with, say, the back of a knife, but the new 10 ml spoon will hold eight grams using the same procedure. The old-type spoon is still supplied with the chelated iron powder.

If dilution rate "A" is to be used, one level 5 ml spoonful of Aquasol will make 12 litres of diluted fertilizer.

Step Four: For each LITRE of the diluted Aquasol, add the required amount of each stock solution. For example, if "A" dilution is used and if 12 litres of Aquasol solution has been made up, then add 180 ml of each of the two stock solutions (Mg and Iron) (ie 12 times 15 ml). If dilution rate "B" is used then the volumes of the two stock

solutions will have to be increased to the rate specified in "Table 2".

Application Rate: March through to December — apply every five days. December through to early March — every four days.

The four-day application rate will depend on the amount of sunny weather received. If cloudy and cool in the hot season, revert to every five days. **Do not reduce feeding rate in winter months.**

The amount to apply to each pot will depend upon its size, and that of the plant in it. Some orchids require very little supplementary nutrition, other larger plants will require more. In any case, it is pointless pouring fertilizer onto the floor, so as a general rule apply just enough so the liquid begins to run from the drainage holes in the pot.

This formulation has been tested on most common orchid genera, including cattleyas for six years. All responded very well.

The cattleyas responded so well in fact that during 1983 and 1984 we saw the larger Blc.'s produce four to seven flowers per pseudobulb — instead of the usual two! Even *Blc.* Sylvia Fry 'Supreme' is now showing signs that it will produce three flowers.

This tends to contradict the Poole & Seeley [2] findings and my only comment is that perhaps the potting materials used required more N.

Paphiopedilums responded well, but during 1983/84 extra N was added, and K lowered and they are now growing into huge plants, and flower stems are much longer.

The only modifications I would now suggest is that paphs should receive more N and less K. This was discovered during 1983 when the effects of higher K were studied. A detailed report is to follow later.

REJECTED AND UNTESTED FERTILIZERS

Maxicrop. This product, **if used incorrectly,** could be potentially harmful to some orchid genera. During the testing with this material, some of the cymbidiums produced symptoms resembling cymbidium mosaic virus, and in others severe chlorotic streaking, and in a few, severe blistering to the juvenile leaves, and later, serious flower deformities. (See AOR June 1982).

Maxicrop, if used alone provides very low volumes of the major element levels. (See Table 1).

Magamp: While popular, this product was not and is still not freely available as other products. It lacks satisfactory levels of N, P, K, Mg and Fe. It is unnecessarily high in P and Mg. The very high Mg level will have an affect on Ca and K absorption levels. Being a slow-release material it is impossible to say when it is exhausted.

When initially applied to orchids which have suffered a Mg-deficiency, they will at first respond well to this fertilizer, but then the response will slow down, unless extra N is provided.

Nicholls[3] reported that slow-release materials may be exhausted much sooner than claimed and this may also apply to Magamp.

Magamp does not eradicate leaf-tip necrosis and it does not produce optimum-growth rates. This may be due to a very low N content which could impede growth rate and flower count. P level is unnecessarily high. The recommended application rate is 25 grams per 200 mm pot which makes it rather expensive for those with large collections!

No analysis figures for Ca, Fe or trace element levels are given for this product, so it must be assumed that none are supplied, or are too low to be included in the analysis on the packet.

Users of Magamp might find improved results if some additional weak ammonium nitrate (or urea) and chelated iron is applied regularly.

Yates Thrive. This and Yates Balanced Orchid Food are almost identical products. The formulation is the same except that Orchid Food has some Fe/EDTA (chelated iron) added to it, and the dilution rates vary. Both are much too strong at the recommended dilution rate and will cause lush, limp and whitish leaf growth. Thrive is cheaper and it CAN be rebalanced (see Table 2). Rebalancing is more complicated than for Aquasol, but if one is prepared to rebalance it, then it is just as good as Aquasol.

Osmocote. This is probably a more suitable slow-release fertilizer for orchids than Magamp, but like Magamp the life of its output is unpredictable. It is better balanced than Magamp, but Nicholls [3] showed that the 8-9 months' version of Osmocote had reduced effects after only four months. Other elements (eg Mg and Fe) would still have to be added if Osmocote is used.

If one cannot use a liquid fertilizer then Osmocote would be the better choice of a slow-release fertilizer in my view, but a little extra Fe and Mg applied regularly will not go amiss.

Trygon Field Pack. This is very weak in nutritional material and possibly contains too much wetting agent. It does however have a use as a source of trace elements which are beneficial, and the wetting agent makes it useful for initial application to fresh pine bark-potting materials, as it breaks down the water repellant in the bark's surface and permits faster penetration of other nutritional material. This could be a better product if wetting agent was reduced and nutrients increased.

Nitrosol. Although this product did give adequate results it did cause us a problem or too. Scums formed on the top of the potting mix (possibly because of the solids in the material)

and because a fertilizer-injection system was used to feed a stock solution of fertilizer into our watering hose the filters soon blocked up.

The solids may take time to decompose and any total nutritional material would not be available to the plants until that occurred which would cause a time lag before producing initial growth responses.

The N, P, K proportions are satisfactory. I would be happier with it if a full analysis was given so that shortcomings could be corrected.

I understand that this product also contains growth factors, eg Triacontanol[4] and Gibereline. The former will increase cell quantity but the latter (if it is a gibberellin) will simply elongate the cell size giving an impression of growth.

Foggitt Fish Emulsion Fertilizer. This will provide: N — 50 ppm; P — 10 ppm; K — 16 ppm; if diluted at one mil per litre. For orchids the recommended dilution rate is **15 ml per four litres** making the rates N — 187 ppm; P — 37 ppm; K — 60 ppm. This provides excess nitrogen and very low K.

No mention is made of Mg, Fe or any other element such as Ca, S, Cl or trace elements being absent or present, so these are presumed missing or too low, in which case further nutrition must be provided. At the price, $1.00 (1981 price) the small bottle of 118 ml would make 31 litres of suitable nutrient solution. At that price it cannot match Aquasol or Thrive, in fact, it would be a very expensive form of nutrition to use if the correct amount was used, without considering the additional material that is needed.

Phostogen. This product was avoided at the time of testing for good reason and subsequent testing (to be reported later) confirmed our wisdom, but it has been heavily promoted some comment should be made on it. Based on the recommended dilution rate its analysis is:—N — 50 ppm; P — 22 ppm; K — 113 ppm; Mg — 7 ppm; Fe — 2 ppm; Mn — 01 ppm; Ca — 20 ppm. S is present but amount is not stated.

The effect of excess K on paphs would be severe. Trace-element data is not provided.

Liquid Versus Slow-release Nutrition. A liquid programme was selected finally, instead of a slow-release form. The reasons for this were many, and if one looks at all the facts a liquid programme has more favouring it.

Firstly, one can predict accurately what is being fed to orchids by using a known liquid programme, whereas the release rate and the element proportion rate of the slow-release material is unknown.

Secondly, a liquid programme can be applied while watering if an injection system, such as an Amiad, Young or Gewa brand, is used, with no extra labour cost, whereas if a slow-release material is applied to the top of each pot (which is best) then that is time consuming and therefore expensive. Slow-release materials are also much more expensive.

If slow-release material is mixed in with the potting mixture chances are that most will be flushed from the pot before an orchid has a chance to make use of it, so it is essential that they be placed on the surface of the pot.

As one must water orchids, a liquid fertilizer can be applied at the same time. Calculations and comparisons indicate that the cost of applying liquid versus slow release on a large scale is very much in favour of liquid fertilizers. Balancing is also very simple.

Potting Mixture. After the original tests were completed, certain further tests were made on compost formulation. Our potting mix was altered to include chopped bracken fern, and this proved an excellent ingredient indeed. It does not break down quickly and it seems to encourage mycelium (fungus body, or roots) to grow in the compost. This has a value in that the mycelium may take up excess nutrients, plus, mycelium seems to take up excess water and that is a valuable aid to orchid growing.

The best test mix formula was:— Charcoal — three parts, pine bark — 5 parts (both 10 mm to 15 mm), peanut shell — 3 parts, chopped bracken fern — two parts, rice hulls — two parts.

Use no peat moss or other fine material such as sand. We have traced rotting roots, excess water retention and salt retention and black rot to these two ingredients.

Since eradicating peat moss and fine ingredients from the potting material **not one case of black rot has been found since 1978.**

Potting-mix materials are still being tested and even better results were achieved in tests during 1983/84 on coarser mixtures. One test comprising 50-50 coarse bark and coarse peanut shell gave excellent results. Coarsely-chopped bracken fern continues to be an excellent ingredient.

Both recommended, rebalanced products can be used on any genus of orchid, but some bark mixtures might require a little extra nitrogen than others. Paphiopedilums under test responded well to an occasional extra addition of a small amount of ammonium nitrate (one 5 ml spoonful to 25 litres of Aquasol solution) *and* the most recent cymbidum potting mixture (above) — *and* larger pots! !

Potassium. Testing just concluded has isolated the supply of excess potassium as the potential cause of growth retardation, particularly flower-stem length. What is more, too great a quantity is not very much! The basic formulation I have recommended will be safe, but if any additional K is provided, growth rates could be retarded, spikes shortened and flowering production re-

duced substantially. The findings on excess K will be discussed in detail in the future.

TABLE 2

FERTILISER REBALANCING

Using Aquasol

AQUASOL DILUTION RATE	VOLUME OF EACH CONCENTRATED SOLUTION TO BE ADDED TO EACH LITRE OF AQUASOL SOLUTION	
	SOLUTION 'A'	SOLUTION 'B'
(A) 1 gram/3 litre.....	**15ml**	**15ml**
(B) 1 gram/2 litre.....	**20ml**	**20ml**

(NOTE: Dilution rate "A" equals one level 5 ml spoonful of powder in 12 litres of water, and Dilution rate "B" equals one level spoonful in eight litres of water).

A stronger solution can be made by doubling all the ingredients in either "A" or "B" dilution rates, however this is not recommended, except for the occasional use of double the "A" dilution rate.

Use the Hortico Chelated Iron 5 ml spoon for all chemical measurements as this is the standard on which this method is based.

Using Yates Thrive

THRIVE DILUTION RATE	VOLUME OF EACH CONCENTRATED SOLUTION TO BE ADDED TO EACH LITRE OF THRIVE SOLUTION			
	SOL 'A'	SOL 'B'	SOL 'C'	SOL 'D'
(A) 1 gram/3 litre	**20ml**	**20ml**	**7ml**	**7ml**
(B) 6 gram/9 litre	**40ml**	**40ml**	**14ml**	**14ml**
(C) 1 gram/1 litre	**60ml**	**60ml**	**21ml**	**21ml**

To rebalance Thrive two extra concentrated (stock) solutions have to be made up, as follows:

Solution "C". To one litre of water add one level spoon (Aquasol type) of Potassium di-Hydrogen Ortho Phosphate making sure it is completely dissolved. Label for identification as usual.

Solution "D". To one litre of water add one level spoonful of Potassium Sulphate (also called sulphate of potash), dissolve and place in bottle and label with identification.

Solutions "A" and "B" are identical to those used in the Aquasol preparation.

The spoon supplied with Thrive will hold nine grams (average) of Thrive powder. One Hortico Chelated Iron spoon will hold approximately half that amount.

Dilution rates "A" and "B" are adequate for normal growth rates. "C" should only be used on an odd occasion to stimulate growth as this is equivalent to full strength Aquasol.

Note: The measure used for the concentrate solutions is once again the Hortico Aquasol/ Chelated Iron spoon.

Measures: For accuracy one or two cheap plastic measuring devices will be needed. One-litre jugs can be bought from supermarkets cheaply and if a suitable small graduated measure is not available from the same source try a photographic shop. They carry a range of cheaper plastic measures. For a bulk vat in which to mix enough fertiliser, if nothing else is available try a very large plastic rubbish bin, measure the position to where enough water will come for the mix and mark that position.

Don't expect miracles on the first application, although if the previous feeding routine was deficient changes will soon be apparent. Some genera will be slow to respond, others more rapid.

A plant with a poor root system will take time to respond.

Some genera are heavy feeders, eg softcane dendrobiums and the stronger dilution rate may be more suitable, the same may apply to lycastes, zygopetalums and related genera. By increasing the feedings to zygopetalums I am beginning to see two spikes per lead.

The proportions of each ingredient must be accurate. If the two additive solutions are supplied lower than specified that will impede the efficiency of the programme. The following steps should be followed:—

1. Firstly, establish healthy root growth (if needed).
2. If plants have previously been fed insufficient Mg and/or Fe, apply double the amount specified for three to four feedings then resume applying the normal amount.
3. If programme is commenced in late Spring or Summer, and plant's leaves remain dull yellow reduce the light intensity by half.
4. Do not use small pots which could confine the subsequent growth which will be produced (this particularly applies to cymbidiums, softcane dendrobiums and other clones that are, or can be, rampant growers).
5. If the plants have healthy roots, or even a few healthy roots only, they should respond rapidly. Those with rotting roots in the majority must first create new root systems before growth responses are likely.
6. Plants will respond more rapidly if light intensity is kept below 2500 foot candles (less for some genera) during the hottest four months. Strong light adversely affected the growth rates on all genera.
7. Once all plants are in a healthy state, and producing new roots they should quickly show a response to the programme.
8. The "A" dilution is very weak, so if response is slow, or application rate has to be reduced try stronger dilution rate "B", or double the "A" dilution rate.
9. The correct potting medium is essential.

PROBLEM CHECK LIST

1. Poor growth rates. Check root system for damage. Correct by using more open mix, and/or by bigger pot. If no response to programme check light, root system, mix, and your water quality and/or pH.

2. Short spikes. See No. 1 and check fertilizer for high K level.

3. Flower deformity. Check K level and seaweed-extract dilution rate, or use of any mixture containing auxins, cytoxins or giberellins.

4. Yellow-leaf colour. Check light levels – decrease light by 25-50 per cent (make sure this is not natural leaf colouring). Increase Mg and/or Fe.

5. Poor flower count. See Nos. 1, 2 and 3. Check also N, P, K ratios and feeding/watering frequency. May be genetic factor.

6. White patches in leaves. Check Mg and Fe levels – increase one or both.

7. Rotting bulbs. Open up potting mix, check method of applying fertilizer to plant's foliage – water plus nutrients in leaf joints can cause bacterial damage. If peat moss and/or sand has been used in mix, they are cause. See No. 1 also.

8. Bud drop. Fertilizer imbalance, trace element deficiency, or root damage, could also be pot is too dry.

9. No flowering. Check light level, temperature levels, root system, pot size, pot space and fertilizer-application rate. A plant with a healthy-root system and strong growth should flower, so if it is healthy it may be a genetic, light intensity or food factor.

10. Lack of roots on epiphytes. Check humidity levels, fresh air levels and potting medium. Carbon must be available for sugar production (which plants can also obtain from barks on host trees).

11. Leaf-tip necrosis. Unhealthy root system, mix too wet, deficiency of magnesium and/or iron, and/or sodium/sulphur build-up.

Implementing the Programme. For any nutritional programme to work, the correct environment must be created, that includes ensuring that all plants have healthy-root systems which can process the nutrients they are fed. The correct amount of light must also be applied. Growth will not occur if roots are rotting, or the light intensity is too high. By repotting plants into an open, airy mix that will quickly encourage root activity. The light level can be controlled by shadecloth. If those two factors are provided a quick response to the programme is likely and it will work at its maximum rate.

REFERENCES:

1. **Charcoal as a Compost.** G.C. Morrison, AOR Dec 1973.
2. **Nitrogen, Potassium and Magnesium Nutrition of Three Orchid Genera.** Hugh A. Poole and John G. Seeley. AOR March 1984.
3. **Nutritional Aspects in the Culture of Cymbidium Orchids.** D.G. Nichols. AOR June 1982.
4. **Effect of Triacontanol on Plant Cell Cultures in Vitro.** Roger Hangarter and Stanley K. Ries. Plant Physiol. (1978) 855-857.

Lot 18 Dandenong-Hastings Road, Cranbourne South, Victoria 3977

NSW WINTER SHOW

This year marked a new venue for the Orchid Society of NSW Winter Show, namely the Ashfield Mall. This is a new shopping centre and consequently orchids were exposed to a new audience. The locals welcomed the show and the enquiry desk was in great demand.

Grand Champion was *Paphiopedilum* Sheerline 'Rondo', well flowered by A. Kirkby. Ace cymbidium grower Tom Price won Champion Cymbidium with *C.* Sylvan Star 'Gemini'. Although slightly marked a superb flowering of *Blc.* Sylvia Fry was so far ahead of competitors that it had to be Champion Cattleya. That beautifully flowered clone of *Phalaenopsis* Alice Gloria, owned by Mr and Mrs Gulbis, just had to win Champion Other Orchid. A near-perfect white! A. Kirkby showed growing versatility by also winning Champion Native Hybrid.

A plant which proved quite a talking point during the show was a massive specimen plant of *Cymbidium tracyanum*, exhibited by R. Vidot, which received Best Orchid exhibited by a Novice and Cultural Certificate, also the AOC Most Pre-eminent Entry.

Parramatta OS reigned supreme in the Best Affiliated Society Class, with North Shore fractionally behind. Sutherland was a very creditable third. Then followed Eastwood, Manly-Warringah, Bankstown, Cumberland, Berowra and Western Suburbs. Every display was a credit to each society.

The theme for these displays was "Scenic Australia". Berowra Orchid Society display was beautifully presented, but in front were some beer cans and other litter with the sign "Don't Rubbish Scenic Australia". Realistic! So realistic that the mall cleaners removed it that night.

In small displays Orchid S.P.E.C.I.E.S. (NSW) won, followed by Five Dock, Kuring-gai and St George. York Meredith entered a small and attractive individual display which was strong on species. Class for four paphiopedilums was won by Stan Condon with John Marks second. A class for four orchids was won by the Chalmers Family.

AWARD CORRECTION

Concerning AOC Award No. 328 and Award No. 329. These awards were given to a paphiopedilum submitted on March 28, 1981 as *P.* barbatum 'Nancy', and owned by B.W. Lovell.

The national registrar and senior judges queried the correctness of this name and pictures were submitted to overseas authorities. Marie Selby Botanical Gardens, identification centre for the American OS has recommended that it is the species *P. callosum.* Hence all records of these awards have been changed to refer to it as *P. callosum* 'Nancy'. This decision accords with policy laid down by the nomenclature committee. It was approved at the 1983 AGM of the AOC.

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The History of *Sarcochilus falcatus* R.Br.

P. ADAMS

Revised version of an article from the Journal of the Orchid Species Society of Victoria.

Sarcochilus falcatus (Orange Blossom Orchid) is the type species and commonest member of the genus *Sarcochilus.* It is a small but striking semi-pendulous epiphyte found in rainforests from the base of Cape York Peninsula to the jungle creeks of Eastern Victoria. There is considerable variation in the size and colour of the scented flowers, which vary from pure white to pale orange. The labellum is variously marked with stripes and blotches in yellow, orange and purple.

Robert Brown, naturalist on Matthew Flinders' voyage of exploration in the *Investigator,* described the species in founding the genus in his *Prodromus* of 1810. The *Prodromus* lists and describes 115 Australian orchids collected by Brown.

The main purpose of the voyage was to survey the coastline in order to add to the scientific knowledge of the continent. The ship was well equipped, with copies of every known map of Australia, journals of previous navigators and a prefabricated plant cabin in the hold for assembly at Port Jackson. The scientific team comprised Ferdinand Bauer, the finest botanical draftsman to visit Australia, William Westall, a landscape painter, John Crosley, astronomer, Peter Good, a foreman gardener of Kew, John Allen, miner (geologist) and Robert Brown.

The 334-ton *Investigator* sailed from Spithead, England on July 18, 1801, landing at Madeira and at Cape Town, where Robert Brown spent three weeks gathering plants, including orchids, around Table Bay. On December 8 they reached King George's Sound in Western Australia and there Brown and Good collected specimens of 500 different plant species in 24 days. After making many landings to collect flora and fauna, the ship reached Port Jackson via the Great Australian Bight on May 9, 1802. Flinders then sailed north, exploring the Gulf of Carpentaria, and circumnavigating Australia. With a sick crew and a ship deteriorating from rotten timbers Flinders was forced to cut short his voyage. He reached Sydney again on June 9 where Brown's able assistant, Peter Good, died two days later.

Flinders then took passage on the *Porpoise* with part of Brown's collections and set sail for England. The *Porpoise* struck Wreck Reef a thousand kilometres NNE of Port Jackson on August 17, 1803 and both Brown's specimens and Good's living collections were lost.

Brown had not accompanied Flinders on the *Porpoise.* Fortunately he had retained duplicates of his collections, and now, with the help of Bank's agent George Caley, he collected about 500 plants in the Sydney and Hawkesbury areas.

In November Brown voyaged with the party which linked up with Colonel Collin's two ships sent from England to form a new colony in the Bass Strait region. He explored the Tamar region, was at the founding of Hobart on February 21, and led exploratory parties to the south and along the Derwent River.

Returning to Sydney in September he was off almost immediately on a trip to the new settlement of Newcastle, at the mouth of the Hunter River. On November 5 Lieutenant Menzies wrote to Governor King that "Brown was up the northern branch of the Hunter River". Brown in a letter to Banks dated December 12 wrote of going up the branches of the Hunter. One of these, the Paterson River, leads into country still rich in *Sarcochilus falcatus.* It is reasonable to assume that this was where the type form was collected.

Brown made his last journey to the Hawkesbury district in February 1805, and left for England, with Captain Kent, in the patched-up *Investigator* on May 24.

The original specimens of *S. falcatus,* like all Brown's type specimens, are deposited in the British Museum. The latin description in the Prodromus is very brief but it established the genus *Sarcochilus:—*

SARCOCHILUS

Perianthii foliola 5, aequalia, patentia, duo exteriora cum ungue labelli subtus connata. *Labellum* posticum, ecalcaratum, ungue, columna continuo; Lamina calceiformi, lobo intermedio carnoso, solido. *Anthera* terminalis, mobilis, decidua. *Pollen* cereaceum.

Obs. Medium tenet inter Cymbidia parasitica perianthio patenti, et Dendrobia, his tamen habitu et structura apulo magis accedens sed vix conjungendus.

S. *falcatus.* (J.) *v. v.*

Translated:

"Sarcochilus falcatus

Perianths leaflike 5, equal, outspread, two outer-most with the claw of the labellum joined underneath. *Labellum* posterior, spurred, continuous with the claw of the column. Lamina slipper-shaped, intermediate lobe fleshy, solid.

Anther terminal, mobile, deciduous. *Pollen* waxy.

Observation: Midway between epiphytic *Cymbidium* with an outspread perianth, and *Dendrobium*, resembling the latter more in habit and structure; but yet distinct."

In Victoria *S. falcatus* is also associated with exploratory voyages and expeditions. In 1869, Dr Ferdinand Mueller, Government Botanist and Director of the Botanic Gardens, travelled by sea to Twofold Bay, and then overland to Genoa, Mallacoota and Cape Howe, making a botanical survey of the southeast corner of Australia. Many new plants were discovered and Mueller made particular note of the associated tropical influence on climatic conditions.

> "The occurrence of many tropical plants in the most southeast portion of the colony testifies to the mildness of its climate . . . Transitions to the flora of NSW were here perceptible everywhere."

Mueller ascended the Genoa Valley to Nungatta and returned to Twofold Bay. On the banks of the Genoa River, in a granitic gorge two miles upstream from the Genoa township, Mueller collected *Dendrobium speciosum* and *Dendrobium striolatum* (*milligani*). It is likely that *S. falcatus*, which is in his list of plants on this journey, was collected in the moist valleys of the Howe Range. Mueller named about seventy species of Australian orchids and assisted George Benthan, noted British botanist, in his compilation of the *Flora Australiensis*.

Epiphytic orchids are only one of a number of plants representing a tropical influence that Mueller recorded on this journey. Some of the other more notable species were *Telopea oreades* (Gippsland Waratah), *Elaeocarpus holopetalus* (Black Oliveberry) and the terrestrial *Caladenia barbata* (now *C. deformis*) and *C. alba*. Earlier, on his second journey in 1854 he had found the cabbage tree palm *Livistona australis*, originally discovered by Robert Brown, in the Orbost area, which he noted as "the most southerly locality in which palms exist in the Australian climate".

The original distribution of *S. falcatus* in Victoria extended west of Mallacoota and it was recorded by R.P. Cameron at Cann River in 1895. He also recorded *Plectorrhiza tridentata* at Orbost in the same year. Extensive clearance of jungle along the rivers of East Gippsland in the first half of this century greatly reduced the epiphyte habitat. N.A. Wakefield, writing in the Victorian Naturalist in 1950, predicted that *S. falcatus* was "doomed to extinction at Norinbee, as jungles of the Cann River fall to the march of progress".

In recent years there have been occasional reports of the orchid along this and other East Gippsland valleys in small remnants of virgin jungle. In the remote Howe Range, the small populations of remaining *S. falcatus* have narrowly survived the ravages of catastrophic bushfires on several occasions during the last decade, which has been the driest in recorded history.

There has been a progressive reduction of the habitat of this orchid over its entire distribution range during the past two hundred years. The sale of large consignments of bare-rooted plants from commercial outlets in population centres well removed from the habitat strongly suggests continuing over collection. Restrictions and requirements for permits to collect are often ignored in the pursuit of financial gain. It is time to review the practice of sales of native orchids from uncertain sources, and to make a plea for the conservation of this superb species.

Acknowledgements. I wish to than Dr S.C. Ducker and Dr J.H. Willis for comments on drafts of this manuscript and also to Ron Kerr, editor of AOR for details concerning Robert Brown.

References:

Brown, R. *Prodromus Florae Novae Hollandie et Insulae Van Diemen.* Introduction by W.T. Stearn, Hafner Publishing Co, Weinheim (1960).

Caley, George. *Reflections on the Colony of New South Wales.* Edit. J.E.B. Currey, Lansdowne Press (1966).

Edwards, P.I. *The Journal of Peter Good,* Bull. Br. Mus. Nat. Hist. (Hist. Ser.) 9 pp. 1-231 (1981).

Kerr, R. *The Sharp Eyes of Robert Brown.* Australian Orchid Review. Pt. I, Mar. 1964. p. 16. Pt. II, Sept. 1964. P. 124.

Mueller, F. *Annual Report of Government Botanist and Director of Botanical and Zoological Gardens,* Victorian Parliament, Legislative Council (1860-61).

Rupp, H.M.R. *The Orchids of New South Wales.* Australasian Medical Publishing Co, NSW (1943).

Wakefield, N.A. *Orchids of East Gippsland.* Vic. Nat. 67 pp. 166-8 (1950).

Wakefield, N.A. *Botanical Exploration of East Gippsland.* Proc. Roy. Soc. Vic. Vol. 72 Pt. 1. Pp. 61-67 (1969).

White, C.T. *A History of Australian Orchids.* Australian Orchid Review Vol. 5 pp. 108-111 (1940).

Society Changes

Orchid S.P.E.C.I.E.S. (NSW). The new secretary is Mrs Audrey Madden of 114 Barons Crescent, Hunters Hill 2110. Phone (02) 916 2236. Mr Ralph Terbutt and his wife Ann are now co-editors of the society newsletter.

Newcastle and Districts Combined Orchid Societies. This is the co-ordinating body for the Newcastle area. The address given in the June issue applies to the Newcastle Orchid Society. Secretary for the Combined Societies is Mrs Marie Parlour, 2 Kallaroo Road, Charlestown, NSW 2290.

Newcastle OS. Now meets at a new venue. The meeting night is still the third Wednesday but at the Masonic Club Hall, Hanbury Street, Mayfield. This is on the northern side of the railway line from the old venue. The secretary is Mrs J. Blackwell, PO Box 301, Mayfield, NSW 2304.

Workshop at Sydney's Royal Botanic Gardens

During "Spring in the Gardens" the Orchid Society of New South Wales will conduct a practical workshop on orchid culture. It will be conducted in a huge marquee in the central lawn area on Sunday, October 7, 1984.

The Royal Botanic Gardens staff and the Orchid Society of NSW have combined resources to ensure that this will be the most helpful workshop ever held. For several years the society has conducted workshops in outer suburbs and has evolved a presentation which has saved time and expense for new growers. But even experienced growers have found these workshops to be of great value. Many come back for a second or third workshop.

There is always some new thing to learn about orchids. So many genera to study and grow, some easy and some hard but all fascinating.

A huge range of species will grow in the Sydney area without heat, some even in the garden or without a special growing house.

The workshop covers all the basics for growing the popular and spectacular horticultural genera. Information will be available on how and where to join an orchid society.

Trade displays will show products available to aid growing and established seedling plants will be on sale. There will be an orchid display and a raffle for a collection of plants.

The programme comprises talks and demonstrations by very experienced growers whose aim is to help others enjoy orchid growing.

Registration cost is $18, which covers a printed copy of the proceedings, lunch, morning and afternoon tea. Registration should be by September 22, if possible, because provision has to be made early for catering. Application to register may be made by forwarding a cheque or money order made out to *The Orchid Society of NSW* and sent to Mr Ian Chalmers, 25 Turriel Point Road, Caringbah, NSW 2229 or Mr Alan Alvis, 5 Knocklayde Street, Ashfield, NSW 2131.

Registrants are required to check in at 8 am to 8.45 am on Sunday, October 7, wet or fine.

If you have not been to a workshop then come and enjoy the experience in the beautiful Royal Botanic Gardens. Tell your friends, too. If you are a grower you will know of someone who has been saying they would like to take up orchid growing.

The nursery of Conrad Loddiges and Sons, of Hackney, appears to have been the earliest English nursery to import and cultivate orchids. The firm was famous for this from 1812 to its winding-up in 1852. Lovely *Dendrobium loddigesii* is a fitting memorial for this enterprise.

Great Show in Adelaide

For some years Garden Week has been an institution in Adelaide. Last year Mr Syd Monkhouse decided it was time that orchids should be a feature of the Garden Week Show. But the Garden Week is an autumn affair held the last week in April. The very worst time for Australian growers, except perhaps for north Queenslanders.

That didn't deter Syd. Soon he had promises from all over the world by famous growers assuring him of support with cut flowers. A committee evolved to handle preparations, build display gear, pick up flowers at the airport and blend props and flowers into a harmony that would stir the public.

The First Garden Week International Orchid Show was an outstanding success. Now the Second Adelaide International Orchid Show has come and gone. It was an even bigger success.

Of seventeen displays, thirteen came from overseas. Six of these were from the USA, one each from England, Singapore, Malaysia, France, Japan and Holland.

For outstanding displays Gold Awards went to the Road McLellan Co of San Francisco, the Maryland Orchid Co of Singapore and Kring Nederlandse Orchideen Producenten of Holland.

The Queensland and Townsville Orchid Societies earned Bronze Medals. L. and H. Arrowsmith and Keith's Nursery, both of Townsville both earned Silver Medals. In addition there were many awards for individual plants.

The result was a glorious panorama of orchids from all over the world, including just about everything that was out in South Australian hands.

A feature of the displays was the number of genera not usually seen in South Australia.

Tens of thousands of people attend the Garden Week Autumn Show so Adelaide citizens have been made aware of orchids as never before.

LABOUR OF LOVE

The Native Orchid Society of South Australia has made a splendid contribution to the Botanic Gardens of Adelaide and State Herbarium.

In acknowledging a very apt gift Gardens secretary, Dr B.D. Morley wrote and expressed "the gratitude of the Board and the Herbarium staff for the pictorial record of native orchid species in South Australia. It has obviously been a labour of love and represents a valuable addition to our material on orchids".

Wonderful. Note, too, that the Australian Orchid Foundation has been compiling a transparency record of Australian species. Anyone able to provide slides of indigenous species is invited to send them to the Foundation.

IN MEMORIAM

THE LATE MR ATHOL BELL

The death of Athol Bell at a comparatively early age is a sad loss to the orchid world. For around forty years Athol worked for many orchid societies in many capacities, lately as vice-president of the Australian Orchid Council.

As well as being active on many important committees, he spoke frequently at societies, even distant ones, and was a senior judge for many years.

Athol was one of the early hybridisers, particularly with paphiopedilums, although his interests extended to all genera. He was one of the top orchid laboratory workers in Australia.

He was always happy to help others. A typical gesture was the giving of an orchid seedling to every registrant at the big Berowra orchid workshop last year.

His friendly personality made him liked; his ability as a grower, hybridiser and judge, made him admired.

We all feel the vastness of your loss Betty and family, and sympathise.

THE LATE LLOYD BRADFORD

Mr Lloyd Bradford joined the Orchid Society of NSW before World War II. He was a devoted species and native grower, and his contribution to the Australasian Native Orchid Society was immense. Although afflicted with cancer some years ago he maintained a normal routine almost to the end. His courage has been an inspiration.

THE LATE RICHARD PETERSON

Mr Peterson died of cancer in May this year. Over the last ten years he has been executive director of the American Orchid Society and its editor. In these roles he has exerted a big influence on the orchid world. Sympathy is extended to our American friends.

Coming Events

Ninth Australian Orchid Conference. Melbourne, September 12-16, 1984.

Orchid Workshop. Conducted by OS of NSW and Sydney Royal Botanic Gardens. Sunday, October 7, 1984.

New Zealand OS Spring Show. September 28-30. Mt Albert War Memorial Hall, Auckland.

International Garden Festival. Liverpool, England. Ends October. Orchids a feature.

German Orchid Congress Show. Leverkusen. February 28 to March 3, 1985.

Seventh European Orchid Conference. Under the patronage of the RHS in commemoration of the century of the first orchid show. Associates: The British Orchid Council and the British Orchid Growers' Association. March 19 to 25, 1985.

SPHAGNUM DANGER

Sphagnum moss has been found to be the carrier of a potentially-dangerous fungus called *Sporotricum schenkii.*

It can enter the body via cuts, scratches or abrasions.

Two American magazines, *American Horticulturist* of September 1983, *Carnivorous Plants Newsletter* and Australia's *Your Garden* of April carry details. AOR thanks Mr S.A. Smith of Ryde for a photocopy of pages from *Carnivorous Plants* dealing with this matter.

The fungus lives in soil but people handling sphagnum moss have been affected by it.

Biochemist Mr R. Reidl, a member of the Bromeliad Society checked his sphagnum moss and also pieces of wood in his Sydney garden and found them both infected with the fungus.

If not treated early the entire lymphatic system can be damaged. If treated early great distress can be avoided. In rare cases it can be fatal.

The danger is in the fact that because it is rare it may not be immediately diagnosed by a physician. It usually begins as a nodule at the site of an injury. Initial lesions resemble warts, boils or chancres. It spreads through the lymph channels to various lymph nodes.

Precautions. Use rubber gloves when handling sphagnum or any fungus-infected garden matter. Wash hands frequently in hot soapy water. Skin damage should be treated promptly. Persistent sores are a signal to seek medical advice.

VIRUS BREAKTHROUGH?

The Wall Street Journal of Friday, April 13, 1984 carries what could be a momentous announcement in its technology section.

RESEARCH ON INTERFERON YIELDS A PENICILLIN FOR PLANT VIRUSES

When scientists first started trying to fathom the secrets of interferon — the human body's natural virus-fighting substance — they had high hopes of developing new weapons against viruses and cancer. They never thought that they might come up with an agricultural chemical worth hundreds of millions of dollars to farmers.

Yet that is precisely the turn interferon research has suddenly taken. Last month a team of American, Israeli and West German scientists reported that an interferon-related chemical they've developed is a potent inhibitor of plant viruses. If field experiments confirm laboratory experience, the chemical could be to plant-virus diseases what penicillin is to human bacterial diseases.

Minute amounts of the chemical sprayed on a plant can stop a devastating virus infection in less than an hour. The chemical probably can be made fairly cheaply in large volume. More important, it is harmless to the plant — and to humans and other animals.

A penicillin against plant viruses has been an elusive goal of scientists for years. About 400 known plant viruses cause billions of dollars in damage to the world's commercial crops each year.

AOR's comment: We hope Friday 13th proves to be unlucky for viruses.

Hilarity Hits Hobart

Plus a Little on the Naming of Orchids

A recent issue of the *Tasmanian Orchid Society Newsletter* contained news of a major find in Tasmania's wild south-west.

It seems that the Professor of Endemic Flora at the ANU, Dr O.R. Kidd had discovered two hitherto-unknown cymbidiums, and had named them *Cymbidium kiddii* and *C. franklandii.*

A glance at the issue's date, April, confirmed one's suspicions.

Nonetheless the professor's detailed descriptions could have fooled anyone not familiar with the correct way to describe a new species.

Cymbidium is the genus established by Olaf Swartz in 1799. The name is based on the latinised Greek word *kymbes* meaning boat-shaped, and refers to the lip.

In 1851, based on a draft prepared by the botanist Alphonse de Candolle, the First International Botanical Congress approved Laws of Nomenclature. Article 33 states that names of persons used as epithets should have a genitive-ending form, and thus end in *-ii* or *-ana.* The first is recommended when the species has been described or distinguished by the botanist whose name is taken, in other cases the second form should apply.

These endings are modified should a name already be a latin form, thus Alexander is rendered *alexandri.* If the name ends in a vowel or y only the letter *i* is added. Other modifications apply if the name has prefixes such as *mac.*

Thus *Cymbidium kiddii* would be correct. Note that in modern practice a specific based on a surname is not capitalised. If named after Mrs Kidd the appropriate name would be *C. kiddae.*

Of course botanists have not always followed these recommendations.

The International Code recommends (Rec. 82E) that epithets taken from geographical names can end in *-ensis,* meaning area where grown; *--anus* indicating possessed by; *-um* indicating possession or resemblance; or *-icus* indicating belonging to.

Thus *C. franklandii* would be correct if the intention was to name it after Governor Franklin, but if after the river one of the above endings would be more correct.

The code requires that a latin description be published in a substantial scientific journal in order to formalise a name.

The latin description, as stated by Lindley, calls for "a full description of every part", but this may not be necessary if a new species is markedly different from any other in the same genus. In which case a short diagnosis may be enough.

Thus the description given in the newsletter: "The flowers which open in Summer are pure white with a deep blue band in the middle of the labellum, flanked by two blue keels", if in latin would be sufficient diagnosis for *C. kiddii.* Sufficient to have botanists all over the world applying to their directors for funds to rush off to Tasmania. It might even attract a special crew from Oxford Scientific Films.

A description in latin is always followed by one in the author's own language in which the location of the type specimen is given.

The *Tasmanian Orchid Society Newsletter* is full of such enlivening touches. Its editors, right up to the present, have maintained a high degree of botanical accuracy, coupled with plenty of data on local culture.

Note. Since writing the above AOR learns that some people did take the announcement seriously. That's a pity. It is hoped that any backlash does not inhibit the prankster's future style. A little humour now and then is to be relished.

REFERENCES:

The International Code of Botanical Nomenclature. Handbook on Orchid Nomenclature and Registration. Botanical Latin, William T. Stearn.

Colour Variants

One of the current standard procedures in plant groups, where flower colour is of no taxonomic importance, is to use the rank: *forma* for the colour variant. Under the *ICBN,* the ranks sub-variety, forma and sub-form are not considered to be taxonomic categories (ie they do not represent evolutionary sub-units of the species) and are used merely to describe unusual or atypical variants which are not significantly different from the normal range of variation in the species.

Because the rank *forma* is not a taxonomic one, it can be used as a means of labelling colour variants found under natural conditions. An example of this could be *Cattleya leopoldii 'alba'* which would become *Cattleya leopoldii* forma *alba.* This procedure is in *no way* binding on anyone — taxonomists or otherwise, and is merely pointed out as being one possible way of dealing with colour variants where the colour is of interest to horticulturists, but not of major importance to the evolution of the species. Certainly in the absence of a revision of the plants concerned, colour differences should *not* be labelled as varieties.

J. Conran in *Queensland Orchid Species Bulletin.*

ANOS NEWCASTLE GROUP

Len Field remarks in a recent issue of the Group Bulletin on the very welcome changed attitude to growing Australian terrestrials. Len remarks that some years ago judges were apt to overlook an occasional terrestrial entry at a show as "only a ground orchid". These days almost all show schedules have a special section for terrestrials.

Len points out that this has a positive side, for with the vast amount of land being cleared, the natural habitat for these plants is shrinking fast, and the more interest shown the better chance for survival.

It might be added that the day will come when plants in cultivation will be needed as a source of seed to enable replanting in nature reserves.

PAPHIOPEDILUMS

THE LATE ATHOL BELL

This article by the late Athol Bell appeared in the May issue of *The Berowra Orchid Society Bulletin*. It is his last summary on the genus he loved and grew so well. It is published here as a tribute to his memory.

A lot has been written about the culture of paphiopedilums from time to time, but I feel there is very little available about their culture in Australia.

On the coastal, frost-free areas the conditions do not have to be so controlled as those in severe frost areas. I believe that on the coast an unheated glasshouse will grow paphs to championship condition.

In frost-free areas the same type of house would need to be gently heated so as to maintain a minimum winter-time temperature of 12°C. Hot water pipes are undoubtedly the best form of heating, but you can choose your own alternative – providing you maintain adequate humidity, at around 60 per cent.

I have long reached the conclusion that light is the critical factor in growing good paphs. Over the years I have seen them grow quite successfully – and flowering well – out in the open from Springwood on the Blue Mountains down through Bankstown to Cronulla on the coast. The great **BUT** when growing outside relies on maintaining the correct light exposure and having plenty of humidity around them. In all outside cases, I observed the light was indirect. In other words, no sunlight whatsoever was allowed to touch the plants. They were so positioned that they received maximum indirect light. This they seem to love. They will grow very well under clear glass, providing the glass receives no touch of sunlight – Winter or Summer.

They must never be allowed to dry out, yet I prefer to keep them just moist.

Many times I have been asked why the new leaves will "flop over" at odd times and I think the answer to this is because the compost has been too moist when the humidity level is very high and this does occur in our hot summer months.

The type of compost and size of container is important for good paphiopedilum culture. The old saying "if you can fit it in a 3" pot don't use a 4" " is good advice. I always use the size pot which will accommodate the roots of the plant and I disregard the size of the top growth or leaf area. Many plants of mine flower in a 2" tube.

A good compost can be made up from:–

1 part by volume of medium bark (no wood splinters).

¼ part by volume of charcoal.

¼ part by volume of shellgrit or granulated limestone.

1 teaspoon of hoof and horn meal, **mixed thoroughly** through each bucketful of the above mix.

Now, if you want to start your collection with seedlings from the flask, you will need a nice controlled area in your glasshouse to do this. You should make up a small hotbox, which will maintain bottom temperature at a constant 25°C; have a moisture-retaining agent such as pebbles or sand in the bottom of the box, which is kept moist at all times. Just sit the pots on top and they will grow very well. It is a matter of choice whether you pot them into community pots or pot them singularly into small pots. We used to pot them straight from the flask, agar and all, into communities; but lately we prefer to pot them singularly after removing the agar. We feel the less you disturb them when they are young the better and this way you only do that once.

Fertilizing is important when you grow in a predominantly-bark mix. If you are a small grower, the Peter's range of fertilizers are wonderful for paphs. Small seedlings do well with a half-strength application of 30-10-10 during the months of September to December, switching to 18-18-18 from December to April. I leave fertilizing alone from May to September. Never fertilize a plant which is not growing strongly and well.

Paphiopedilums will be attacked by thrip, scale insects and mealy bugs. Good hygienic glasshouse control will see you free of these pests. Mealy bug can be a dreadful pest if allowed to accumulate. They will crawl inside flower sheaths when extremely small and completely rob the flower of its lustre and send it brown. Supricide is a great spray for mealy bug, but please be careful when using it and observe all the most-thorough precautions. Cleansall is also a good spray and is quite safe to use. It must be used more regularly, at least every second month.

I sincerely hope I have been able to excite your interest and more importantly influenced you into growing some of this genera.

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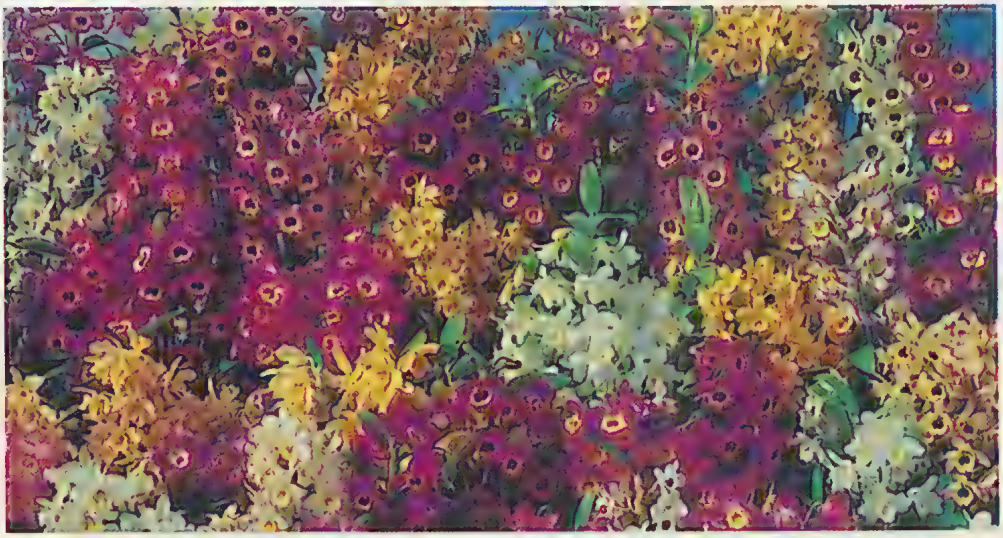
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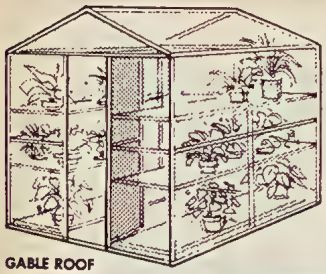
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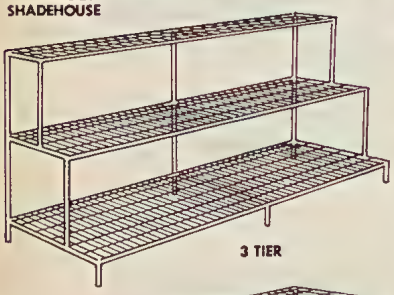
TUBULAR BENCH KITS

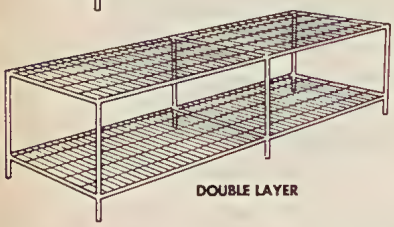
KNITTED SHADECLOTH

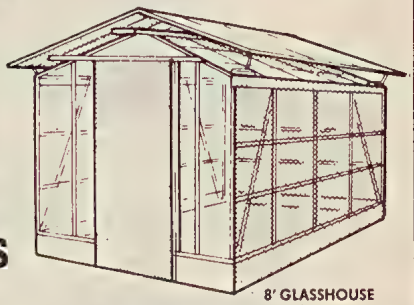
DOMESTIC GLASSHOUSES

COMMERCIAL GLASSHOUSES TO 50ft WIDE

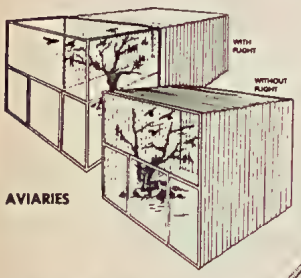
AVIARIES — Rectangular and Hexagonal


3 TIER


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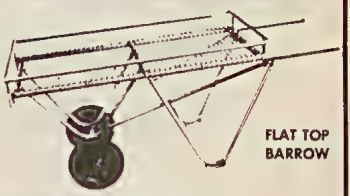

8' GLASSHOUSE

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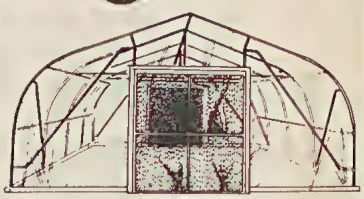
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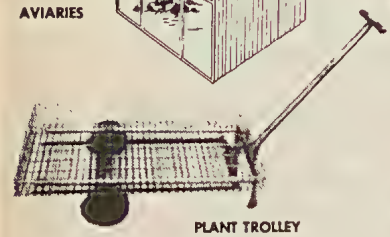
PLANT TROLLEYS AND BARROWS

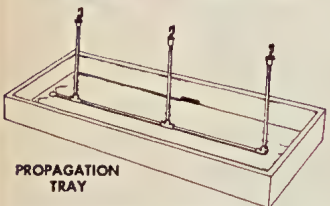
20ft WIDE TUNNEL HOUSES

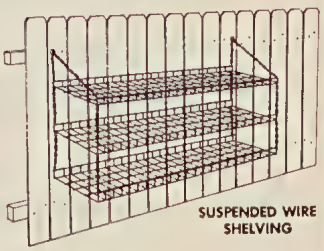

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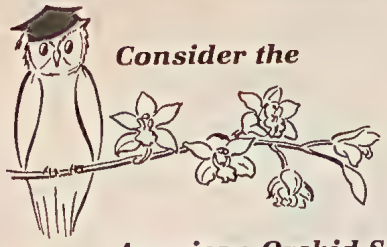
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Vol. 49, No. 4 $4.50 (New Zealand $6.50)
December Quarter 1984
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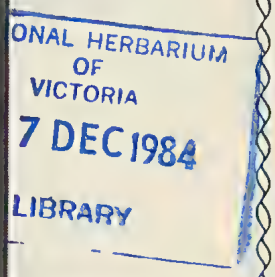
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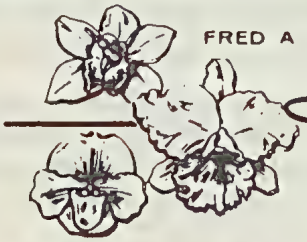




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Pomatocalpa arachnanthe, Phaius grandiflora.
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83.18 Arunta 'Perfection' x Babylon 'Castle Hill'
84.35 Excalibur 'Ygerne' x Logfire 'Embers'
84.40 Sun Showers 'Sunny' x Tongariro 'Kirsty Lee'
84.07 Mary Pinches 'Del Rey' x Rio Rita 'Radiant'
83.04 Mini Mint 'Lois' x Voodoo 'Gypsy Red'
84.37 Kurun 'Magi' x Pendragon 'Broadmoor'

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83.07 Bexley Radiance 'Bexley' x Voodoo 'Gypsy Red'
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84.90 Whyba 'Violacea' x Bexley Radiance 'Bexley'
84.91 Whyba 'Violacea' x Sensation 'Vieux Rose'
84.97 Negrito 'Nutmeg' x Sabre Dance 'Chocolate'
84.89 Kiata 'Nightshade' x Negrito 'Cherry Ripe'
84.84 Valya Craig 'Judy' x Miretta 'Mem. A.A. McBean' 4N
83.19 Valya Craig 'Judy' x Coraki 'Norah'

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COMPACT STANDARD

to describe another phase of our cymbidium development programme.

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It's an exciting time — the three-colour photographs opposite show early-flowering tetraploids resulting from our hybridising programme.

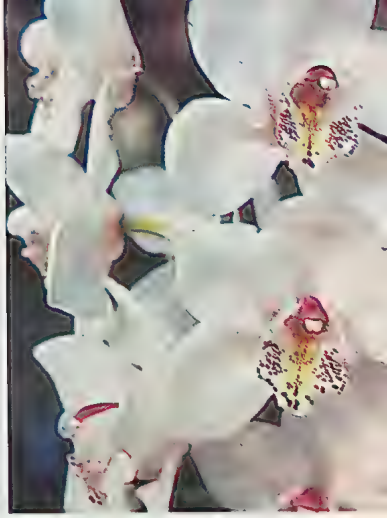
(WINTER FAIR x VALLEY PARADISE) 'Perfection' (top right) is a compact standard cymbidium and crosses from it are featured in our mailing list. The other two first-flowering seedlings indicate the worth of the Alvin Bryants as early parents. Alvin Bryant 'Regal' crosses cover an excellent range in our November mailing list.

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AUSTRALIAN Orchid REVIEW

DECEMBER QUARTER
Vol. 49 No. 4

Printed and Published by:
GRAPHIC WORLD
14 McGill Street, Lewisham 2049
560 6166

Editorial Associates:
QUEENSLAND: Mr Frank Oelkers, 419 Robinson Road, Geebung 4034.
VICTORIA: Mrs I. Hutchins, 37 Elliot Street, Mordialloc, Victoria 3195.
SOUTH AUSTRALIA: Mr N. Lenkic, GPO Box 730, Adelaide, SA 5001.
WESTERN AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154.
TASMANIA: Mr C. Nicholas, 7 Kelvin Avenue, Moonah, Tasmania 7009.
INTERNATIONAL: Mr G.H. Slade, Box 797, Vila, Vanuatu.
Editor: Ronald Kerr.
Editorial Committee:
R. KERR, G. HANSEN, A.B. PORTER
Address Editorial to:
R. KERR, 260 Geoffrey Road Chittaway Point, NSW 2259
Phone: (043) 88 2605
Advertising and Subscriptions to:
ELIZABETH LOWE, 14 McGill Street, Lewisham, NSW 2049.
Phone (02) 560 6166

SUBSCRIPTIONS. 1985/1986 within Australia $33.00. 1985 $18.00. Overseas surface 1985/1986 $37.00. 1985 $20.00. Airmail. NZ 1985/1986 $42.00, 1985 $24.00. All other. 1985/1986 $56.00, 1985 $31.00.

TO JOIN AN ORCHID SOCIETY
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NSW: Miss B. Oldfield, 61 Mountford Avenue, Guildford 2161.
QUEENSLAND: The Secretary, GPO Box 2002, Brisbane. Phone: (07) 398 6031.
VICTORIA: Mrs I. Hutchins, 37 Elliot Street, Mordialloc, Victoria 3195. Phone: (03) 580 4917.
SOUTH AUSTRALIA: Mr G. Heylon, GPO Box 730, 5001. Phone: 44 4255.
WEST AUSTRALIA: Mr John M. Foley, 39 Stirk Road, Alfred Cove, WA 6154. Phone: 330 2132.
TASMANIA: Mr J. F. Smith, 11 Warren Court, Howrah 7018. Phone: 44 1555.
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To comply with the International Code of Botanical Nomenclature the whole of a species is in *italics* and the second term has no capital. With hybrids only the first term is in *italics*, the second starts with a capital and is not latinised. Generic names, used in a non-botanical sense do not have a capital nor are they in italics. In society bulletins and on place-cards italics can be indicated by underlining.

COVER STORY

This particular clone was one of the first to flower from a batch of seedlings resulting from crossing *Paphs.* Lyric 'Stanza' (pod parent) and Amanda 'Joyance'. The cross was made September 1975 by Mr Stan Condon, Australia's Mr Paphiopedilum. The original Songbird cross was made by Ratcliffes, using Lyric 'Dansk' with Amanda 'Joyance'. This particular seedling, Songbird 'Pathfinder' was judged and photographed shortly after opening. It improved with age and went on to become Grand Champion Orchid of the 1983 Spring Orchid Festival. This would be the first time a paphiopedilum has beaten all other genera at this major spring show. Many competent judges believe that *Paph.* Songbird 'Pathfinder' is possibly the finest paph. hybrid seen in this country.

Control of International Trade in Orchids

GRAHAME T. BYRON — National Parks and Wildlife Service, Canberra

Presented to a Meeting of Orchid Society of NSW, Species Society and ANOS Representatives — November 9, 1984

Introduction. Cultivation and international trade in orchids has occurred since the early 1730's. Since that time the increased demand for orchids has matched the world-population increase. This, together with loss of habitat, has put extreme pressure on the wild populations of these slow-growing plants with their sensational flowers. A number of species are no longer found in their natural habitat and others are threatened with extinction. By the turn of the century, large commercial interests had begun ravaging wild populations of orchids. Due to the inherent difficulties in seed germination and the slow-growing habit of many orchids, the demand was largely met by specimens taken from the wild.

The development of tissue culture techniques in the early 1960's and improved germination techniques provided an opportunity for commercial quantities of orchids to be artificially produced. As these techniques have been refined the percentage of orchids entering international trade from artificially-propagated stocks has grown substantially.

However, rare species of orchids continue to have considerable appeal to avid collectors, who are not satisfied by the 60,000 or so registered artificial hybrids and species grown from seed or tissue cultures. To cite a recent example of such a case, in 1982 a new species of orchid was described which was only known from one hillside location in Yunnan Province, China. The following year, wild-collected plants of this species were offered for sale in the USA, UK, Taiwan and Japan.

Whilst it is recognised that the major threat to the survival of many species of orchid is loss of habitat, the continued demand for wild-taken orchids serves to exacerbate an already-serious problem.

What is CITES? Over-exploitation of wildlife, much of it for international trade, has been responsible for massive declines in the wild populations of many species of other animals and plants as well. It is believed to threaten nearly 40 per cent of all species of animals in danger of extinction, and puts at risk the long-term survival of substantial numbers of other species of plants and animals.

The wildlife trade involves a wide variety of species, both as live specimens and as products. Millions of live animals and plants are shipped around the world each year to supply the pet trade and to meet the demand for ornamental plants. Fur-skins, leather, ivory, timber and articles manufactured from these materials are all traded in large quantities.

The scale of this exploitation aroused such concern for the survival of species, that an international treaty was drawn up in 1973 to establish a world-wide network of controls on international trade, in endangered species and species that could soon become endangered.

Known as CITES, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, now has 87 member countries, including Australia. These countries hold biennial meetings to review the implementation of CITES and consider proposals put forward by member countries to alter the lists of species to which CITES applies. Non-governmental organisations, including trade associations, take an active part in the meetings as observers. The next meeting of CITES is to be held in Buenos Aires, Argentina in April 1985.

How Australia implements CITES. When Australia became a member of CITES in 1976, CITES controls on Australian international trade in wildlife were implemented by the Customs (Endangered Species) Regulations. These controls were administered by the Australian Customs Service.

On May 1, 1984, with proclamation of the Wildlife Protection (Regulation of Exports and Imports) Act, responsibility for Australian CITES controls and controls on export of other Australian wildlife was transferred to the Australian National Parks and Wildlife Service. The Australian Customs Service however is responsible for ensuring that material exported or imported does so in accordance with the requirements of the Act.

Species protected by CITES are listed in the Schedules to the Wildlife Protection Act. Schedule 1, which includes nine tropical orchids (Table 1), consists of species that are threatened with extinction in the wild, and which are or may be affected by trade. Schedule 2 species are those which may become threatened if trade was unregulated, and other species which may not be endangered or potentially endangered, but which are included to enable practical regulation of trade in endangered species of similar appearance. All Australian species of orchids are included in Schedule 2.

In effect, the Wildlife Protection Act regulates

trade in all orchids because some are threatened with extinction, and many more are entering trade from rapidly-dwindling wild populations. Trade in artificially-propagated orchids is regulated to reduce the risk of wild specimens entering trade mislabelled as artificially-propagated specimens.

Although the majority of the international orchid trade is now comprised of propagated plants, many imported by the USA, Europe and Japan still come from wild habitats. The USA previously exempted artificially-propagated plants from its controls, but found that a large number of exporters abused the exemption. The US Fish and Wildlife Service now carefully regulates trade in artificially-propagated orchids and scrutinises each export request.

The Botswana meeting of CITES members in 1983 established a plant working group to examine ways in which CITES regulation of trade in plants can be improved, both to reduce trade in endangered species taken from the wild and simplify controls applying to trade in artificially-propagated plants. The group met in March 1984 and considered

- ways of simplifying regulation of trade in artificially-propagated plants;
- whether species needed to be added to or deleted from the lists of species covered by CITES;
- development of a standard list of names for species listed on CITES;
- provisions for trade in specimens salvaged from land-clearing operations;
- establishment of rescue centres for confiscated plants;
- development of means of identifying plants in trade;
- improvements to enforcement of CITES;
- education and publicity concerning CITES plant trade.

The report of the group will be considered at the next meeting of CITES members.

Documentation required. To minimise interference with trade in artificially-propagated specimens, Australia has made special arrangements. This has been done because artificial propagation can materially assist with conservation of wild populations, by reducing the need to use them as a substantial source of plants. These arrangements exempt orchidists regularly importing or exporting artificially-propagated plants, from the need to obtain Australian permits for each shipment. An authority from the Australian National Parks and Wildlife Service is available, which will allow the export or import over a specified period of those artificially-propagated specimens to which the Act applies. Initially authorities for plants subject to CITES controls have been issued with an expiry date of December 31, 1984. On renewal, these authorities will have a six-month period of validity. Holders of authorities are required to provide at the expiry of the authority, details of transactions undertaken.

When **exporting** artificially-propagated plants covered by an authority, the exporter must attach labels to the consignment and ensure that the authority is sighted by the Australian Customs Service officer processing the export documents. The label is a certificate of artificial propagation and is necessary to avoid the plants being confiscated when they arrive in the importing country.

When **importing** artificially-propagated plants the authority must be presented to enable the plants to be cleared by the Australian Customs Service. The authority will only enable clearance of plants, which are accompanied by a certificate of artificial propagation issued by a CITES management authority of the exporting country. Certificates or documents issued by any other authority cannot be accepted.

When an authority is issued it is accompanied by a set of notes which outlines the procedures that must be followed when exporting or importing artificially-propagated plants.

Applications for authorities should be made on Form AA3.

Authorities apply only to the import or export of artificially-propagated orchids of species or hybrids not listed on Schedule 1. A permit for each shipment is required for wild-harvested specimens of such species. However, permits cannot be issued for such specimens until a management programme has been approved under the Act for the species involved.

The import or export of artificially-propagated plants of Schedule 1 orchids, also requires a permit for each shipment. Applications for permits should be made on Form AP1.

Trade in tissue cultures (ie callus tissue, seedlings or cuttings growing on an artificial nutrient medium under sterile conditions and contained in a sealed container) and the flowers of artificially-propagated orchids not listed on Schedule 1 of the Act, have been exempt from control altogether, as have seed of all species.

These controls are summarised in Table 2.

How does this affect other controls? An authority or permit issued under the Wildlife Protection Act does not exempt the holder from the requirements of other legislation. On import into Australia the requirements of the Customs and Quarantine Acts must be met and exported shipments must be covered by a phytosanitary certificate where these are required by the importing country. Countries may also vary in the way in which they implement CITES. The particular requirements of other countries should

Table 1
Wildlife Protection
(Regulation of Exports and Imports) Act 1982

SCHEDULE 1 ORCHID SPECIES	
Cattleya skinneri	— Skinners cattleya or white nun
Cattleya trianae	— Christmas orchid or winter cattleya
Didiciea cunninghamii	
Laelia jongheana	
Laelia lobata	
Lycaste virginalis var. *alba*	— white nun
Peristeria elata	— Dove orchid, holy ghost orchid
Renanthera imschootiana	— Red vanda
Vanda coerulea	— Blue vanda

always be checked before sending or ordering CITES specimens.

Who issues permits and authorities? All permits and authorities are issued by the Australian National Parks and Wildlife Service from its Canberra office. Orchidists requiring an import/export permit or authority should submit a completed application form to:

Director, Australian National Parks and Wildlife Service, GPO Box 636, Canberra, ACT 2601.

ATTENTION: Wildlife Protection Section.

Copies of which are available from the ANPWS or Collectors of Customs in each capital city.

Applications reach the Service not later than 10 working days prior to the proposed commencement of export or import, and must be accompanied by the fee specified in Table 2. Cheques should be made payable to the Collector of Public Monies. This fee will be refunded in full if an application is unsuccessful.

Anyone experiencing difficulties with understanding the controls, or with importing or exporting shipments may contact the Wildlife Protection Section during business hours on (062) 46 6414.

Progress. CITES has brought a wide measure of control to the international wildlife trade. This control is being steadily improved as more countries join CITES. Members are also strengthening their ability to control exploitation of their natural resources and are developing better legislation and procedures to enforce CITES. The establishment of the CITES plant-working group foreshadows much greater emphasis on effectively controlling trade in CITES-listed plants, including orchids. Australian action in introducing the Wildlife Protection (Regulation of Exports and Imports) Act enables Australia to meet its obligations as a member of CITES. It also ensures that trade that is permitted does not adversely affect the survival of CITES species.

Table 2
Orchids — *Import* and/or *Export*

Derivation	Schedule 1	Schedule 2
Wild Taken	Prohibited	Management Programme Required
Artificially-propagated		
Seeds	Exempt from control	Exempt from control
Bulbs	Permit required	Authority (multiple shipments) Permit (once only shipment)
Flowers	Permit required	Exempt from control
Whole plants	Permit required	Authority (multiple shipments) Permit (once only shipment)
Tissue culture	Permit required	Exempt from control

Applications for —

Authorities, should be made on Form AA3. Fee for authority: $14.00.

Permits, should be made on Form AP1. Fee for permit: Private transaction $10.00, Commercial transaction $40.00.

Public co-operation. Like most laws and conventions, CITES and the Australian legislation implementing it, needs the support and co-operation of the public. Indeed if, as stated in the September 1984 issue of the *Australian Orchid Review*, 'the concept is splendid but the organisation still creaks a little' such co-operation is essential to find the solutions to stop the creaking without losing sight of the concept. In this respect, the 11th World Conference of the International Orchid Commission is to be commended for its adoption of a 'Code of Ethical Practice' with regard to trade and exploitation of orchids.

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FLASK SALES TO AID FOUNDATION FUNDS

CITES, the Convention on International Trade in Endangered Species, has closed the door on international trade in some orchid species and made it very difficult with a great many others.

Fortunately one man in Australia has been specialising in raising species from seed for more than 25 years and has built up an outstanding stock of stud plants. He is Ian Walters of Townsville.

Some of these plants are on the number-one list. They cannot be imported. In addition some countries have banned the export of their rare orchids.

Ian is making flasks of these rare species available to help the funds of the Australian Orchid Foundation. The margin over normal costs will go to the Foundation. The aim is to see that these rare species are as widely distributed as possible so that some of them will become future breeding stock. Those that don't will give pleasure to many who otherwise would never have had the chance to know them.

The first two plants below are on the number-one schedule list. Others are banned for export from their home countries. Note that all flasks are 100 ml and contain a minimum of twelve plants. This flask size ensures that seedlings can grow to large size and robustness before they need to be planted out. Available flasks are:—

Cattleya trianae. A typical labiata type with a beautiful cerise-fronted labellum and yellow throat, and variable cream to rose segments. It is a large and robust plant with up to three flowers per stem, and each flower up to 18 cm wide. Showy. From Colombia where it is now almost extinct. Named in 1864 for Dr Triana of Bogata by Jean Linden and H.G. Reichenbach.

Renanthera imshootiana. A plant from the monsoonal warm areas of Assam, Burma and Indo-China. Bears a mass of fiery red, orange or yellow flowers on a branching stem. Flowers are large, bloom in summer and last four to five weeks. It should be kept fairly dry preceding flowering. Sanders introduced it and M.A. van Imschoot of Ghent, for whom it was named by Reichenbach, flowered it.

Cattleya rex. Reported as extinct in the wilds of Peru and Colombia. A stem carries three to ten large, showy, whitish flowers, the labellum having a yellow throat and red veins. Breeders will need to go back to this species. Named by J. O'Brien in 1890.

Cattleya schilleriana. Dramatic for colour. Flowers have segments of a rich brown, spotted dark maroon. The lip is prominently three-lobed and heavily-veined in yellow and red. Now rare in Espiritu and Bahia States, Brazil. Reichenbach named it in 1857 after Consul Schiller of Hamburg.

Dendrobium sanderae majus var. *surigaenense.* Sanders imported it from the Philippine island of Luzon. It is noted for exceptionally large flowers, white in colour with a red lip. Likes intermediate growing conditions.

Dendrobium trigonopus. A species from Burma, Thailand, China and Indo-China. Noted for striking pointed but wide segments of golden yellow. The broad pointed lip is marked with faint red lines. Imported by the Low Nursery and named by Reichenbach in 1887.

Grow as for Indian dendrobiums under intermediate conditions.

Eulophia decyiana. Madagascar prohibits export of this species. It is a terrestrial with a marked annual growth rhythm. Use an open compost with plenty of decayed leaf mould and some river sand. Winter temperature should not fall below 15°C. Repot when new growth commences. It grows rapidly in spring and after flowering should be allowed a dry rest.

Flasks are $12.00 each plus delivery cost. Airfreight delivery goes to most postcodes in Australia and is $6.00 for one to twenty flasks. Delivery to your door takes up to 48 hours.

Orders for these AOF Endangered Species should be sent direct to Ian Walters, 1419 Ross River Road, Kelso, Townsville, Queensland 4810.

NOTE. Schedule 1 items above are only being offered to growers in Australia. It is possible to obtain a special export permit for Schedule 1 plants in flask, but the cost in time and fee, plus air freight, makes exporting very expensive.

NEWCASTLE TAPES IT

Mrs Bagnall of Newcastle Orchid Society has produced two tapes on orchid culture for borrowing by members. On these veteran expert-grower Steve Seymour has recorded his deep knowledge of orchid lore. Tapes by other experienced members, and there are plenty of them in the society, are in prospect.

A committee headed by Mrs Bagnall has been working on the production of a booklet on fertilizers. The production of information regarding local culture, either on tape or in duplicated form, can easily be undertaken by even a small society. Experienced growers get to know their own area extremely well and the recording of their experience could be of utmost value to new members.

How about taking the idea to your next society meeting!

Orchid people

Kaye Baylis is the first lady to be made an honorary member of the Orchid Society of West Australia. Since joining the society early in 1969 Kaye has been unstinting in her many services to fellow members. She has been treasurer since 1972; a member of the organising committee for the Fifth Australian Orchid Conference; and a leading member of the women's auxiliary.

Kaye is renowned for her skill in floral art and is a consistent exhibitor in this field at monthly meetings and shows.

★ ★ ★

For eighteen years John Brown has been a member of the Orchid Society of West Australia and for fifteen of those years he has not been out of one office or another. He has been honorary secretary; on the judging panel since early 1967, and registrar since 1979. He served as a vice-president during 1971-73, and was returned for a second term in 1980. Thus John currently holds the offices of registrar and vice-president. In October the society recognised his sterling services by conferring life membership.

★ ★ ★

Alex Johnson is noted for his growing of cattleyas. For many years he conveyed his deep knowledge of the genus to fellow members of the Orchid Society of West Australia in his monthly notes published in the society bulletin. Alex joined the society in 1962 and has been on the judging panel since 1967. He was on the programme sub-committee for the Fifth AOC Conference held in Perth 1977. Alex is very approachable and members know they can always rely on him for advice on cattleya culture. His work for the society has been acknowledged by the honour of life membership.

★ ★ ★

Mrs Phyllis Giles is well known due to her association with world-renowned Wondabah Nursery. Though not involved actively in its running Mrs Giles has always delighted with her charm nursery and visitors fortunate enough to meet her.

However, it is as an active member and supporter of the Eastwood Orchid Society that she excels. Over many years she has given tremendous support to society shows and social functions. The collection and transport of members' plants for society exhibits at Orchid Society of NSW shows has been made much easier due to the facilities she has made available.

Many years ago the Eastwood Society recognised these sterling services by making Mrs Giles its patron.

★ ★ ★

John Apperley of Nowra is one of those tireless individuals evidenced by the fact that he has been president of the Shoalhaven Orchid Society for more years than most of us care to remember.

John grows orchids extremely well and has done a bit of hybridising over the years. He was the first person in Australia to win an Award of Quality which entails growing and exhibiting twelve clones of the one cross. This award was made at the Orchid Society of NSW 1976 Winter Show. Lately John and the public-minded members of the Shoalhaven Orchid Society have been involved in the building of an orchid house in the Nowra Public Gardens.

★ ★ ★

Chris Nicholas has been AOR's highly-regarded editorial associate in Tasmania these many years, and his wife Phyllis is currently president of the Tasmanian Orchid Society. Unfortunately Phyl had a spell of bad health a couple of years ago, but with determination fought any tendency to feel sorry for herself. She took on the job of president for the second time as part of the fight back to normal health.

Chris writes that he has now taken early retirement and is now "frantically working on rebuilding our orchid collection which . . . suffered badly during Phyl's long period of sick leave. Pleased to say she's toughening up well, so anticipate that the next couple of years will see both she and the orchids in much better form. Both are very resilient".

So we're happy to announce they have won the Grand Championship at the TOS Spring Show.

LOST DIARY

New Zealander John Campbell attended the 1983 Australian Orchid Conference in Townsville, and was on the Iron Range Orchid Safari just before it. John kept a comprehensive diary of these events but unfortunately mislaid it somewhere between Townsville and Brisbane.

John writes, "A little note in AOR just may help to locate my diary". John Campbell's address is 21 Blakes Road, Prebbleton, Canterbury, NZ.

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A VALEDICTORY

The creator of *Dendrobium* Bardo Rose

WALTER T. UPTON

Herbert James Rumley Overall, Bert to everyone, has surely been one of the most fascinating personalities associated with the Orchid Society of NSW. This remarkable man died a few weeks ago at the age of ninety-two.

His life story reads like the scenario for a novel or a movie.

The late Bert Overall was born on August 15, 1889, at Macquarie Plains on Tasmania's rugged and wild west coast. He went to school at Zeehan, then a town supporting hundreds of lead and silver mines and thousands of miners. Zeehan even had an opera house where Dame Nellie Melba sang. Times were hard in those days when miners risked their lives daily for a pittance, and young Bert had to leave school at the age of thirteen. Fortunately not before his schoolmaster, Lewis A. Peers, had sown the seeds of the naturalist in Bert's fertile mind. The brilliance in his mind was even then apparent for he had won a scholarship but his family was too poor for him to be able to take it up.

His first job was driving a horse and dray. Then he became the driver of a "bullock express", and went on to bigger things in Queensland for a while where he drove a locomotive for a sugar company.

Back in Tasmania he joined the Tasmanian Field Naturalists' Club on February 4, 1909. His certificate of membership was signed by club chairman Leonard Rodway, then honorary State botanist. Bert's copy of Rodway's book *Tasmanian Flora* is signed by Rodway. The book contained the most complete account of Tasmanian orchids up to that time. I have seen both the certificate and the book.

Bert's father had been trained at the famous English nursery of James Veitch and Sons. In 1908 they bought ten acres at Sulphur Creek and set up business as a nursery.

About this time the need for a road from Hobart to Zeehan was apparent and Bert worked with a mining engineer who was surveying the track. The engineer was Thomas Bayles Moore, a keen amateur botanist who has had several plants named after him. This contact with an experienced botanist in an area teeming with a new and fascinating flora undoubtedly fostered further his interest in plants. This contact over a period with an educated man must also have sponsored his determination to improve his position in life. The only opportunity for advanced education on the west coast of Tasmania was at the Zeehan School of Mines and Metallurgy, an affiliate of the University of Tasmania. So in 1910, at the age of twenty-one he enrolled for the three-year course. He gained the highest awards for mineralogy and metallurgy, including the BSc in Chemistry (University of Tasmania) Certificate. Bert showed me this certificate dated November 20, 1913. I also saw his Certificate of First Class Diploma in Metallurgical Chemistry and Assaying, from the Zeehan School of Mines.

This led to a job in Sydney and to his taking up residence at Bardo Road, Newport, an area which even today is a naturalist's paradise.

Bert maintained his interest in Tasmania all his life and made frequent return trips.

During the many hours I have spent chatting with Bert he has told me not only the above information about himself but he has also taken me on many walks he had done as a young man. On these he described in minute detail the plants he had seen on the way. I remember other instances of his total-recall memory and the later production of documents to back them up.

He was particularly knowledgeable on Tasmanian history and had met all the outstanding Tasmanians of his era.

Ferns and orchids seemed to be his greatest love, although he was very familiar with all our native flora and fauna. He grew native plants to perfection.

This love of plants was translated to active work on their behalf. He became president of the Pittwater Flora and Fauna Society, a role he filled for many years. He was also a president of the Manly Orchid Circle.

Bert Overall joined the Orchid Society of NSW shortly after it was founded. He was an enthusiastic supporter of the establishment of the *Australian Orchid Review,* and contributed many photographs and short articles over a period of many years. The very first photo in the first issue of *AOR* is by Bert. It shows *Sarcochilus hartmannii* as grown by Wilhelm Schmidt of Turramurra, a German woolbuyer who spent nearly all his working life in Australia. Herr Schmidt was also an early member of the OS of NSW, and a great friend of Bert. The second issue of *AOR,* on page 7, contains a picture of *Lc.* Canada which had been raised from seed and flowered by him. Wilhelm must be regarded as Australia's pioneer hybridiser. The cross *Dendrobium kingianum* x *D. tetragonum* was registered by him in 1928. The only previous registration of a cross between

two Australian species was that registered by Sir Trevor Lawrence of Dorking, England, in 1892, when the name *Dendrobium* Specio-Kingianum was given to his cross between *D. speciosum* and *D. kingianum.*

This latter raises an interesting point in nomenclature. The *natural* of cross of these two species was originally named by the Queensland colonial botanist F.M. Bailey, as *Dendrobium speciosum* J.E.Sm. *var. delicatum* F.M. Bail, in the Proceedings of the Royal Society of Queensland, 1884. Bailey did not alter this determination until 1904 when he recorded it as *D.* x *delicatum* in *Queensland Flora.* The International Registration Authority regards *D. delicatum* as the correct name for registration purposes. However, man-made hybrids can be labelled *D.* Specio-Kingianum.

Undoubtedly it was the friendship and influence of Wilhelm Schmidt which interested Bert Overall in orchid hybridising.

Schmidt loved Australia. For him the rise of Hitler and World War II were tragic events. He was interned when war broke out and died of a broken heart.

The *Dendrobium* Bardo Rose cross was made by Bert in September 1952, using a red *D. kingianum,* collected by Wilhelm on the McPherson Range, as the pollen parent. The first clones flowered in shades of delicate pink. Bert Overall registered the cross in 1961. And what better name could there be than *Dendrobium* Bardo Rose — the rose-tinted dendrobium from Bardo Road.

Clones of this first cross were slow in reaching collections but by the mid-sixties there were enough on the show benches to arouse new interest in native orchids. Bas Borger and Wayside Nursery repeated the cross many times and a large number were in flower in time for the World Orchid Conference in Sydney during September 1969. The huge native display at the conference, and the beautiful native orchid displays over a number of years on the stage of the Sydney Town Hall, together with the formation of the Australasian Native Orchid Society, started a whole school of interest in the growing and hybridising of Australian native orchids.

It has influenced me and such hybridisers as Bill and Jean Cannons, David Cannon, Ken Russell, the Jupps, Roger Bedford, Ira Butler, Ted Gregory and others.

Thus the seeds that Bert Overall pollinated have continued to grow and grow — and the best is yet to come.

A picture of one of the original clones of *D.* Bardo Rose is published in this issue. It was taken in 1979 and shows Bert Overall standing alongside the plant. This plant was given to me by Bert as quite a small piece. It has been seen at many of the North Shore Orchid Society displays, at the OS of NSW Spring Festivals, and has won Best Specimen Plant on a number of occasions.

As *D.* Bardo Rose 'Jill' it received a Cultural Certificate from the Orchid Society of NSW. It won Champion Australian Native Orchid at the Sixth World Orchid Conference here in Sydney.

Bert knew all the greats of Australian orchidology who lived during all his long lifespan and counted them as his friends. With his passing our native flora has lost a champion and friend. Australia has lost a man with nearly a century of knowledge of our native flora, and also of our way of life and times.

There are many to mourn the passing of a gentleman of the "old school". I feel many who were not fortunate to know him personally will join them.

ORCHID CLUB OF SOUTH AUSTRALIA INC

Awards for the Year Ended November 30, 1984

No. 185	*Oncidium sphacelatum,* CC/OCSA
14.11.83	Grown by Greens Orchids.
No. 186	*Paph.* Deception II 'White Eyes', HCC/OCSA
1.3.84	Grown by K.W. & A.M. Minne.
No. 187	*Paph.* Transvaal 'Panorama', HCC/OCSA
12.3.84	Grown by Adelaide Orchids.
No. 188	*Paph. venustum* x Goultenianum, HCC/OCSA
13.7.84	Grown by E.D. Whait.
No. 189	*Cym.* Winter Fire 'Beverley', HCC/OCSA (77.57)
28.7.84	Grown by Lambert Orchids.
No. 190	*Paph.* Marjetta 'Cabernet', HCC/OCSA (76.0)
13.8.84	Grown by Adelaide Orchids.
No. 191	*Paph.* Gowerianum x Maudiae, HCC/OCSA
31.8.84	Grown by McCauley Family.
No. 192	*Blc.* Goulds Gold 'Mem. Jim Wilkins', AD/OCSA
31.8.84	Grown by Parade Orchids.
No. 193	*Paph.* Gowerianum x *P. procrustes,* HCC/OCSA
6.9.84	Grown by McCauley Family.
No. 194	*Paph. haynaldianum* x *P. lowii,* HCC/OCSA
4.10.84	Grown by N. Zurcher.
No. 195	*Cym.* Sensation 'Purple Perfection', AD/OCSA
15.10.84	Grown by M. Weston.
No. 196	*Paph.* Vexillarium 'Dark Lashes', HCC/OCSA
1.11.84	Grown by N. Zurcher.
No. 197	*Paph. callosum,* HCC/OCSA
1.11.84	Grown by N. Zurcher.

Two-day Seminar at Mt Gambier

The very successful seminar run by Mt Gambier OS and mentioned in the September issue of AOR has resulted in a profit of $278 and $200 of this is being used to buy books for the library. The seminar was virtually a one-man orchid workshop. Syd Monkhouse gave potting demonstrations and illustrated lectures on just about all the major genera on the Saturday, and dealt with aspects of judging on Sunday.

In a major raffle over several weeks the society raised $463.80 to aid the Orchids International '86 Fund. All South Australia's affiliates are contributing substantially to ensure Orchids International will be a world-standard event.



^

***Miltonia vexillaria* x *M.* Hamburg 'Red Velvet'**

An unregistered grex which the Sub-Tropical Orchid Council gave a Cultural Certificate. Grown by D. and N. Pullin of Maroochydore, Queensland. It carried 37 flowers and six buds. Grown in a 15 cm squat plastic pot, in a mix of two grades of Australian pine bark with limestone chips, and fertilized with Thrive.



<

The creator of *Den.* Bardo Rose

The late Mr Bert Overall and a specimen plant of *Dendrobium* Bardo Rose 'Jill'. The plant is a clone from the original batch. It was given to Wal Upton by Mr Overall.

The wide view at Adelaide's Spring Show

The Orchid Club of South Australia reached a huge audience at their new venue. This scene shows only about half the Show. Read Syd Monkhouse's story in this issue.





— and the intimate view

Close-ups like this were everywhere. This fine specimen, *Cymbidium* Bingo 'Pink Beauty' was Best Intermediate Cymbidium. Exhibitor: G. Forrest.

Photos: John Vivian

Orchid Gardens

The Spring Show of the Orchid Club of SA Inc

SYD MONKHOUSE

The greatest orchid promotion that South Australia has ever seen was on view from August 31 to September 8, 1984.

The actual show, covering 650 square metres was particularly attractive featuring formal garden beds, surrounded by Wistow slate-walling stone, with attractive warm ivory-coloured garden ornaments tastefully placed in many exhibits. Pot cover was provided by 50 cubic metres of aged sawdust and 200 bales of straw supplied staging height in the exhibits.

Why the big change in our 1984 Spring Show?

Briefly — the OCSA has exhibited its spring show in the auditorium, second floor, John Martins Emporium, Adelaide for over 20 years. The original success of these shows had dwindled in latter years and, it was realised that some changes had to be made. Only 3,700 spectators viewed the 1983 show.

Negotiations with the Royal Agricultural and Horticultural Society of South Australia had been progressing for several years and the obvious decision was quickly made to stage our spring show as one of the major features of the Royal Adelaide Show.

Promotional details were resolved to everyone's satisfaction and our first show at the Wayville Showgrounds was a "goer". Final accommodation and design details were not completed until some six weeks before the show began.

The move to the Royal Adelaide Show placed our spring show into a different league to anything previously attempted. The necessity to establish a large professional show, well planned, and with lots of flowers, about two to three weeks earlier than our usual spring show time certainly presented a challenge and there was a little apprehension.

Sponsorship is the "name of the game" these days as without this, such a spectacular show as that planned would have cost many thousands of dollars. However, convincing sponsors that they would obtain sufficient advertising mileage from an orchid show was no easy task. Personally I can vouch for the many hours and telephone calls, plus miles of travelling, that was done to secure the sponsorship for this first year.

Success was achieved and edging stone for exhibits was obtained by courtesy of Wistow Slate Co. Composted sawdust came from Nu Erth Organics, statues, bird baths, fountains were from Rivoli Period Decor, brush fencing from Brush Panel Fencing, shadehouse and benches from W.A. Young & Co, $2,000 worth of travel courtesy of Qantas, champion cash trophy from ANZ Banking Group, plus help from Adelaide Irrigation Services, Coca-Cola Bottlers Ltd, several South Australian orchid nurseries, Nippy Orange Juice Co and several private individuals.

There is much more to staging an orchid show than just putting plants into an exhibit!

Work continued for three weeks at the show site, prior to the staging and I guess very few orchid club members and few of the public appreciated the hundreds of hours of work put in by a handful of club members to set up the show ready for the orchid plants. Orchid club members who enjoy the privileges of a progressive club, including professional bulletins, top-comfort accommodation for meetings, and low subscription rates that are in no way representative of the value of membership, should remember that this situation can only exist if a goodly profit is made from our public shows. The debt owed by a club, to the hard-working element *before, during* and *after* the show is generally not fully appreciated.

"Orchid Gardens" evolved in the following order:—

Black plastic was placed over the entire show floor area.

The show design was marked in white on this plastic.

This design followed a very formal garden layout. The centrepiece was a large, many-tiered fountain standing approximately 2.5 metres high. Around the fountain a large circular bed of orchids featured a background of tree ferns and conifers, large specimen cymbidiums grading down to groups of intermediate and miniature cymbidiums, paphiopedilums, odontoglossums and other miscellaneous orchids.

Four triangular garden beds surrounded the circular walkway around the central display and these carried some beautiful arrays of cymbidiums and made up the huge rectangular central feature. Long gardens of orchids were staged against the side walls and interesting displays featuring willow trees and a pergola surrounded the staircase well, which led down to the ground floor. Beautiful hanging baskets of miniature cymbidiums and ferns and ivy decorated the stairs and enticed patrons up to the "Orchid Gardens".

The orchid club official trading stall nestled in one corner of the large first floor hall, surrounded by a beautiful and decorative brush fence. In the adjacent corner was the spectacular shadehouse provided by W.A. Young & Co full of flowering orchids — the first prize in the monster raffle of the orchid club.

Of course, the real value of the "Orchid Gardens" display, apart from the large financial inflow to club funds, was the fact that at least 250,000 members of the public viewed our spring show. The promotional value of this was phenomenal. Ample publicity on television and in the press added to the overall effect which has resulted in orchid growing becoming an instant craze here in South Australia.

Perhaps it is the coming of age of the entire hobby of gardening that it can be appreciated by sponsors as a means to get their message to the public. Maybe now the immense funds being ploughed into sport can be shared with the greatest of all hobbies — GARDENING. Justly, orchids are showing the rest of the floricultural world just how it can be done.

The Walter Duncan Pavilion — the hall that was used for the "Orchid Gardens" display, will be the venue of the show for "Orchids Australia '86". Our first display there proved that it is an ideal site with perfect conditions for the health of the plants and flowers.

Tasmanian Orchid Society

In spite of all gloomy predictions of a late-flowering season and few spikes the Spring Show drew many comments for its colour and pleasing effect.

Melbourne judge Geoff Browning chose *Cym.* Winter Fire 'Harmony' as Grand Champion, exhibited by Chris and Phyl Nicholas. A choice which fitted well the show theme "Orchids in Harmony". Reserve Champion was *Cymbidium* Clarisse Carlton 'Cooksbridge' shown by Bushland Orchid Nursery.

The AOC Plaque for Most Pre-Eminent Entry went to *Paph.* Invincible, owned by D. Bourne. Ron Mansfield won the prize for a Golden Orchid with *Oncidium* Palmyre x *O.* Trixedo.

Floral art was a feature of the show, with Mavis Mitchell as the champion.

Nearly fifty classes were competed for and prizes were well distributed among members. Individual displays carried the theme by featuring an array of miniature musical instruments. Truly a show where everything was in harmony.

YOU ARE WELCOME AT BAIRNSDALE

The Bairnsdale and District Orchid Group, formed in December 1983, is alive and well and meets on the second Thursday of each month at the Library Meeting Room, Service Street, Bairnsdale at 8.00 pm.

We extend a warm welcome to fellow orchid growers either passing through or staying in our area to attend our meetings and exchange ideas with us.

Orchid Society of WA

All the winter and spring shows which climax the orchid year are over. All that remains is to get on with the repotting and cleaning up in preparation for next year.

Numbers were down in both our major shows, no doubt due to a peculiar winter season and the spring show being later than usual. The altered date was to allow members who visited Melbourne for the conference time to get back and exhibit.

Although quantity was down the quality was high at both shows, and the way they were laid out ensured very colourful effects.

Notable at the winter show was the fact that all the top winners were outstanding clones of recent crosses. Grand Champion was *Phalaenopsis* Betty Conroy x Vallemar x (Annazham x Orlando) exhibited by Mr J. Chow. W. and L. Janney exhibited the Champion Paphiopedilum, a cross between *P.* Amber Glow and *P.* Winston Churchill. Reserve Champion Paphiopedilum went to J. and D. Flemings' *P.* Amber Star x *P.* Winston Churchill.

Mr and Mrs J. Pyper had the Best Novice Paphiopedilum prize with *P.* Greenshanks 'Glorious'. Champion Cattleya was the fine *C.* Lunar Orbit, owned by Mr and Mrs L. Gale. The splendidly-early *Cymbidium* Palace Court 'Royal Blush', shown by E. and B. Beisley was Champion of its Genus.

The spring show. *Cymbidium* Levis Duke 'Bella Vista' has been consistently high in the placings all over Australia, and here it was beautifully flowered by A. and L. Lane to be acclaimed Grand Champion. Reserve Champion was another plant of the *Cattleya* Lunar Orbit which won Champion Cattleya at the winter show, shown by the same growers, Mr and Mrs L. Gale. Definitely a clone worthy of a cultivar epithet.

Best Novice Cymbidium was *C.* Jungfrau 'Dos Pueblos' exhibited by Mr M.J. Chow. The Best Cymbidium Seedling is always an interesting class since it is indicative of things to come and a guide to breeding potential. The winner was *C.* Western Hill 'Spring Beauty' (Western Rose x Hamsey) exhibited by Mr and Mrs J.A. Coleman.

The ladies excelled in the floral art classes. Not only were there more entries than ever before at both shows, the artistic standard was outstanding.

John Foley

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Compact standard and super-production cymbidiums

ALVIN BRYANT

The winds of change are blowing over our standard cymbidiums. It has been nice to think of them as a homogeneous group but this in fact is not the case. In the past they have been broken into diploids, triploids and tetraploids and then last year they were prodded again to yield up those with the super-production potential. Well, it's not over yet for another group has to be extracted. These are the small-bulbing, short-leaved types with standard-size flowers which can best be described as "compact standard" cymbidiums.

The advantages of small compact clones need hardly be stated. Those working on pot plant and miniature development have been concentrating in this area for a considerable period of time but it has not been an easy pathway when the parent stock has been so limited. With the standard cymbidiums attention has been focussed on their development in relation to flower quality and colour range to cover the full spread of the season. The use of the compact types had not been ignored but little could be done, for the standard development in order to succeed had to draw on the widest range of plants available. Two factors now are changing this, namely (1) the present goals are virtually achieved and (2) sufficient properties now exist in the compact standard types to undertake a worthwhile development. In effect, a point in the development has been reached where the emphasis can change from the prime consideration of the flower and raceme to that of the plant and flower.

There are now two factors operating which must have a profound effect on future development. The first, discussed in an earlier article was that of super production and the second is that of the more compact plant. Ideally the two should be linked together but it will take time to know just how successful this will be. One of the disadvantages of the compact standard plants is that the raceme length and number of flowers is also reduced and the question must be asked as to whether or not it is advisable to have the multiple-spiking property which, although a key requirement in the standard super production clones, might further reduce the flower count if present in the compact standards.

It would be true to say that hybridisers have been working with compact standard types right from the beginning. One only has to look at species such a *C. erythrostylum, C. mastersii* and *C. eburneum* to realise this. However, the compact nature of the plants was not always one which was looked upon with favour. I can recall my thoughts when I made the Sylvania cross (Early Bird x Sheba) in 1963. Early Bird 'Pacific' was small growing and I viewed the property as a disadvantage for it only carried six flowers and the prospect of limited flower count which was fairly certain to be linked with plant size was not a welcome thought. Still, there was no choice for at that time Early Bird 'Pacific' was the only known tetraploid with May flowering time.

An outline of what followed may be indicative of what to expect in this type of development. A photographic record also happens to exist in the June 1979 issue of the *Australian Orchid Review,* page 73 of a succession of crosses from Early Bird 'Pacific'.

In 1968 when Sylvania 'Sonnet' first flowered it looked as if there would be a straightforward pathway for it was a compact standard which was a decided improvement on its immediate parent Early Bird 'Pacific' which in turn was a vast improvement on its immediate species parent, *C. erythrostylum.* In the succession of hybrids which have flowered from Sylvania 'Sonnet' however, there has always been a link between flower count and plant size. In addition if the bulbs were too small there was a tendency for bulbs to be produced which never flowered although the number of flower spikes which came from an established plant was often good. In the main Sylvania 'Sonnet' yielded standard-size progeny in the smaller-size range and these carried counts of better than ten blooms. Where larger plants resulted the flower count could be up to 20 as is evidenced with the well-known Lisa Rose 'Fireglow'.

From the successive generations of crosses from Early Bird 'Pacific' it is possible to pick up a pattern. In the Sylvania cross, Early Bird compact type x Sheba standard, both compact standard and standard-size clones appeared. In the next generation Valley Paradise cross, Sylvania 'Sonnet' compact type x Pearl Easter standard type, no compact standards were observed. However, in the next generation Winter Fair 'Crystal' standard type x Valley Paradise standard type, a small percentage of compact standard types reappeared. This indicated the compact standard type was recessive for Early Bird 'Pacific' was in the Winter Fair background also. This is further supported by the yield of small numbers of compact standards when Winter Fair 'Crystal' is crossed with

other standards with Early Bird 'Pacific' in the background.

One superb clone which flowered may also provide the link with super production. (Winter Fair x Valley Paradise) 'Perfection' also inherited the mulitple-spiking property together with the ability to throw a percentage of spikes which carried ten blooms.

It was only recently that attention was diverted back to the feasibility of real development with the compact standards when one cross yielded only clones of the compact standard type. It was Sylvania 'Sonnet' x Baltic 'Leanne Sessions' 4n, a tetraploid cross. (A correction factor is needed here for those following through on the lineage — Baltic 'Leanne Sessions' is certainly not a true Baltic cross — general flower characteristics indicate it to be one of the Kurun crosses). Baltic 'Leanne Sessions' has small bulbs although the leaves are longer than the usual compact types. This was to some extent reflected in some of the seedlings. While in the main the flower count was eight or nine blooms to a raceme and the racemes were shorter, sufficient flowered for clones to appear which had ten or 12 flowers to the raceme and others which had quite long racemes. At last it was practical to develop the compact standards as cut flowers.

It can be seen from this that compact standard types with sufficient flower count are hard won and I do not see a straightforward pathway to developing high-production compact standards. Further, the compact types are coming from more than one species background. As a result, what has been observed in the case of descendants of *C. erythrostylum* may not be the general rule so the potential of each different background type will have to be explored. Nevertheless logic does point in a certain direction. The compact types have been improved over their background species and some have flower counts over ten so they can be further improved by intercrossing with the standard types. Also the indications of the recessive nature supported by the complete population of compact types coming from the Sylvania x Baltic cross where both parents were of this type indicates progress will be rapid once the base breeding clones are obtained, as whole populations will come from these crosses.

It is now possible to cross sophisticated high-production tetraploids carrying 20 or so blooms to the raceme with the compact standards knowing that the results will be highly useable for the majority of the progeny should be of standard size and production. This may optimise the chances of compact standards appearing with good numbers to the spike. (There will be a trial and error factor in finding out which parents will throw the compact standards). For the present the intercrosses of the compact types should be aimed at the pot plant trade while those with the higher numbers can be extracted for standard flower production and polymin development. As for the inclusion of the multiple-spiking property, it will still be a matter of "wait and see" with clones such as (Winter Fair x Valley Paradise) 'Perfection' being ideal choices to pave the way.

22 Cook Street, Kurnell, NSW, Australia 2231

First Class Certificate Judging

The Editor, AOR

Dear Sir,

At a recent general meeting of The Orchid Club of South Australia during a programme on judging the point was raised by a member, Mr Ray Dunn, on the method of calculating the figure in a judging category, eg whether when calculating the points out of 30 for colour in a cymbidium, one starts with 30 points and deduct for bad features or start at zero and give points for good features. It appears that the Australian Orchid Council in their book on judging gives no guidelines.

I feel a uniform instruction should be issued in this area and the method could be called the teabag system — "Is it as good as Bushells?"

The reason for introducing a method such as the teabag system is this. Up until this year the only cymbidium ever to gain our highest award — FCC — was Girrahween 'Enid'. It gained an FCC in New South Wales in 1941 for Dr Kirkland of Vaucluse, New South Wales. The very same orchid gained an FCC in 1947 for Dr A.C. Burstal, also of New South Wales. The point is this, that because no top award was given in the next 38 years, one would have to assume that no orchid as good as Girrahween flowered.

We can now start with a clean slate because this year the Victorian judges have seen fit to give our highest award, the FCC to *Cymbidium* Jubilation 'Geronimo', owned by Bob Hodgins, and I offer congratulations to both the judges and the grower for breaking the drought.

I hope that the judges do not wait another 37 years to give an FCC. In future I feel they should say, "Is it as good as Bushells?" and if it is better than Jubilation 'Geronimo', it should gain an FCC.

Yours sincerely,

R.W. (Bob) Nicolle

GRAFTON OS AIDS CATHEDRAL

Profit from the Grafton OS Spring Show, held on September 20 and 21, will be devoted to beautification of the cathedral grounds. The society has a long record of such assistance to the community.

Meetings take place on the third Wednesday each month in the senior citizens' hall.

The hybridisation of compact-growing cymbidiums

W.R. (BILL) JOHNSON

For a number of years I have been listening to orchid growers state that they dislike growing standard cymbidiums because they are too large and awkward to handle.

Some even suggested that there was the potential for getting a hernia, or perhaps a slipped disc if one wasn't careful! Others indicated that they did not want to buy a van to cart their orchids to shows and consequently grew only small-growing orchids, and therefore bought only miniature cymbidiums.

If only they knew . . . many of our so-called miniatures have foliage as large as or larger than most standard cymbidiums if grown properly.

Having a "back problem" myself I can appreciate the concern some have about that, but then the modern standard cymbidiums are, without doubt, the most spectacular orchid around so we are missing something if we do not grow them. So then, why couldn't something be done to make standard cymbidiums to the specifications of those who are concerned about their "hernias", or the female equivalent — whatever it is!

That's precisely what occurred to me some six years ago. I noted that there was a few standard cymbidium clones around which were almost truly miniature in their plant habit. So, why couldn't we breed them smaller instead of larger?

In the late 1970's I began to buy divisions of known small-growing standard cymbidiums, and then seedlings from parents which were likely to produce small progeny.

By 1982 it was becoming obvious that my expectations were correct, the seedlings I selected were virtually dwarf foliage standard cymbidiums, or, as I prefer to call them, Compact Standard Cymbidiums.

Some four or five years ago I researched the genetic lines of the parent clones which I considered would produce compact plant habit and I produced a number of genetic charts for them. I also checked the number of times each species appeared in the lines of each parent. From this I reached two conclusions.

1. The number of times each species appeared in the background had no bearing whatsoever on the immediate parent selected, unless it was a primary hybrid. I must qualify that, of course, by the statement that the original cause of smallish plant mass must ultimately be traced to the mixing of the genetic qualities of the original species.
2. A certain number of clones appeared regularly in the immediate background of most. Some of these were:— Spartan Queen, Alnwick Castle, Sunrise, Ceres, Melinga, Ruby, Rincon, Remus, Ngaire, Regency, Rio Rita, Terama, Sensation and Dawn Fraser.

That list can be narrowed down to Ceres, Ruby and *i'ansonii* because all small plant habit seems to emanate from them. It is possible that *C. tracyanum, C. eburneum* and *C. erythrostylum* will respond to a small-growing co-parent.

When two parents in this group were crossed together, a large number of compact clones appeared. The same phenomena occurred if two, or more, of those clones appeared in the background of new crossings.

For example, Regency x Remus, Regency x Spartan Queen and Spartan Queen x Rio Rita, all produced very small plants in a high percentage. Some, particularly those containing either Spartan Queen, Remus or even Rio Rita even produced miniature flowers in addition to the compact-plant habit.

Having acquired all this information I had to wait the time when my theory would be said to have potential. This came when enough seedlings matured and allowed me to put the theory into practice by making new crossings which it was expected would produce a range of new compact parents.

That's where we are right now. I now have the basis for creating a wide range of "compact" breeding clones, with the knowledge that at least a percentage of compact plants will appear from any new crossings made.

The question is, does the orchid grower want compact-growing standard cymbidiums? I have been quietly carrying out some "market research" on this subject for some time and the answer appears to be a very emphatic yes.

Any steps we take to produce compact plants from now on should be considered carefully. Any breeding stock should be considered for what it can contribute, and a specific aim should be formulated.

What I have formulated as an ultimate aim is this:—

1. Plant foliage should be between 12 inches (300 mm) and a maximum of 15 inches (375 mm), with 24 inches (600 mm) being an interim goal.
2. The spike should be about three feet (one metre) and capable of producing 20 flowers to a stem, two spikes to a bulb, and the first flower at the very least nine inches (225 mm) above the foliage.
3. Flower stems should be long and flowers must be well spaced — to cater for later

conversion to tetraploid status and/or the need to carry larger flowers.
4. Foliage should be upright, not drooping.
5. Colour range and flowering times should cover the available range.
6. Diploid and tetraploid crossings must be made.
7. Bulbs must grow upright so that spikes will not grow into the side of a pot.

That sounds like a tall order, but within two years it will not be, because by then I expect to be breeding with second, third and even fourth-generation compact clones with just those characteristics.

The diploid aspect is not a problem, tetraploids will take a little longer although I will soon have access to a number of compact diploid clones which have been converted to tetraploid status, as well as chance tetraploids from triploid crossings, and some colchicine-converted diploid clones.

The newest compact crossings which are beginning to flower are from Sensation x (Wiena 'Cindy', x Tethys 'Black Magic') and I have many other seedlings which flowered between 1981 and 1983 which can be crossed with those to give further second and third-generation "compact" clones.

The benefits of compact-growing standard cymbidiums can be significant.

Firstly, there is less chance of that hernia, but what also is obvious is that the visual display of the flowers will be better because the spikes could not be hidden by the foliage. If multiple spikes are produced then we will see a cloud of flowers well above the foliage.

Small foliage will make the grower with small accommodation happier, and pest control should be easier. Even commercial growers should be able to house more plants because smaller pots will be suitable. Transportation problems should be reduced, because foliage will not damage the flowers so easily.

By selective breeding, spike habit could be made tall, upright and slightly arching, and the spikes self-supporting.

For those who show their orchids, the effect on displays should be substantial. Less foliage — clearly-seen flowers and lots of them.

I cannot see why this aspect of breeding has not been considered before — the breeding stock has been there for many years, the interest in miniature cymbidiums should have indicated to hybridisers there was a need for them.

For some time now I have been quietly conducting a "market research" programme on growers. So far I have found only enthusiasm for the idea of compact-standard cymbidiums. This indicates that high sales potential is there.

With more and more people moving to home unit accommodation, the concept of smaller plant habit is desirable if commercial markets are to be retained, or expanded.

My guess is that Compact Cymbidiums will be a sellout. My considered opinion is that unless we introduce a vigorous compact-breeding programme large-foliage cymbidiums will discourage people from growing standard cymbidiums and turn them towards miniatures.

What growers do not realise is that in the pursuit of miniatures at any cost, hybridisers are using as their breeding stock too many clones which have foliage and plant mass larger than many standards with the consequent results that many "intermediates" now flowering are enormous.

In the rush to produce miniature and intermediate cymbidiums at any cost, large plant mass is now a common feature of many. We have gone full cycle as it were.

For those wishing to acquire compact standards the following is a list of seedling crosses which have produced compact plants. Those marked "*" have also produced some "intermediate-sized" flowers too.

Diploids:—
- Sensation 'Melita' x Wiena.*
- Sensation 'Vieux Rose' x Ovation.
- Melinga x Coraki.
- Sensation x Tethys 'Black Magic'.
- Alnwick Castle x Peetie.
- Dawn Fraser x Calle Rio Verde.
- Melinga (=Woodstock x Sirius).
- Sirius x Melinga.
- Rampur x Sirius.
- Rio Rita (x Sussex Dawn*, x Regency*, x Spartan Queen*, etc.).

Tetraploids:—
- Jumbo (Lunagrad x Dawn Fraser) (ex 3n cross).
- Operetta (Rincon x Miretta) 4n.
- Valley Gratitude (Lunagrad x Baltic).
- Aratika (Fred Stewart x Acapulco Gold).
- Dawn Fraser x Calle Rio Verde (4n and 2n version).
- Mariner (Rincon x Stanley Fouraker)* 4n.
- Mouchette (Rincon x Scaramouche)*.

That is just a sample, of course, many more will appear soon.

To avoid large-growing clones, if they are crossed with a parent of equal large plant mass, those parents I would overlook, to name a few, are:—

Fanfare 'St Francis', Miretta 'Mem. A.A. McBean', Babylon 'Castle Hill', Vieux Rose 'Dell Park', some Zumma Boyd clones, Peetie 'Steadfast', Etta Barlow clones, those with strong Alexanderi 'Westonbirt' influence, Lunagrad 'Elanora', Peri, Wallara 'Gold Nugget', Rosarita clones, Solana

Beach 'St Francis' and Fred Stewart clones.

However, if they are crossed with a clone which is a compact grower, and/or one which has strong genes for compact growth then I would reconsider the following:—

Miretta, Wallara, Vieux Rose, Lunagrad, Fred Stewart, Babylon, Solana Beach and even Peetie (in 2n or 4n status).

The diploid field is wide open, and large plant mass can be avoided providing we do not breed from those clones which resemble *C. insigne* and *C. lowianum.* Some of the genetic qualities of both *C. lowianum* and *C. insigne* will be necessary, if only for their spike habit.

Finally, lets look at some of dimensions of the cymbidium species which could aid reduced plant size:

C. eburneum — foliage size 600 mm — 24 inches.

C. erythrostylum — foliage size 350 mm — 15 inches.

C. grandiflorum — foliage size 600 mm — 24 inches.

C. i'ansonii — foliage size 400-600 mm — 18-24 inches.

The other species generally regarded as "standards", eg *C. insigne* and *C. lowianum* have foliage in the order of three feet or more. *C. mastersii* and *Parishii* are considered to be synonyms of *C. eburneum. C. i'ansonii* is considered to be a natural hybrid.

C. Ruby, an alleged natural hybrid is an unknown quantity and its genetic data is unknown to us. Its progeny carry a trait for producing miniature flowers which is rather dominant. Certain of its progeny carry this miniature flower gene. For instance if two clones carrying Rio Rita 'Radiant' genes are crossed a high percentage of intermediates can be expected. Vieux Rose for example carries this factor, and if Vieux Rose is on both sides of a cross miniatures flowers and probably small plant mass will appear.

If only we could establish accurate facts on *C.* Ruby! !

The smallest described "standard" species is then 350 mm (14 inches), that size should be easily obtainable. But . . . I have some hybrids which are no more than 300 mm (12 inches) tall, and they are plants which are at least six years old and mature which would indicate that hybridising has reduced plant mass below that of the smaller "standard" species and if that is correct further hybridisation should produce the desired reduction needed to achieve a stated aim.

I think the future for compact cymbidiums is very bright but only time will tell if we can produce them to the standard we require and if they will be accepted.

C/- Glenwood Orchids Pty Ltd,
Lot 18 Dandenong-Hastings Road,
Cranbourne South, Victoria 3977

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A NEW FORCE IN QUEENSLAND

North Moreton Orchid Council

At a meeting held on October 29 last, at Petrie the above council was formed. The council covers the area just north of Brisbane where several societies have been co-operating for some time.

The meeting was chaired initially by Mr Chas Hill, president of the Australian Orchid Council. After discussion a constitution was adopted and officers elected.

This new regional group follows the success of such bodies as the Tropical Queensland Orchid Council, and the Sub-Tropical Orchid Council. Also, the Northern Rivers Orchid Council in NSW.

Such bodies have shown that training of judges, award and show judging, planning of show dates, joint shows and social activities can all be simplified and enhanced by regional panels.

The office-bearers and secretary's address are below. Note that the society name is abbreviated in brackets after each officer. President: Jimmy Raddatz (Redcliffe). Vice-President: P.K. (Dick) Searle (North Star Day OS). Honorary secretary: Doreen Marques (Pine Rivers). Honorary assistant-secretary: Leney Smith (North Brisbane). Honorary treasurer: Bruce Butterworth (Pine Rivers). Public relations officer: Jim Smith (West Brisbane). Auditor: Jack McKinley (Redcliffe). Registrar: Frank Oelkers (Aspley).

Correspondence should be sent to the Secretary, PO Box 334, Strathpine, Queensland 4500.

Coming events

Rockhampton OS Orchid Dalliance: May 4 and 5, 1985. A relaxed weekend of bush-house tours and social functions for all orchid lovers. See many top collections and have a terrific social life. Contact ROS secretary, PO Box 5949, Rockhampton Mail Centre, Queensland 4702 for details.

International Centenary Orchid Conference. Incorporating the British Orchid Council's Congress, the 7th European Orchid Conference and the British Orchid Growers' Association Show, RHS Halls, London. Contact secretary C/- RHS, PO Box 38, Vincent Square, London SW1P 2PE.

Kew Seminar. London. Monday, March 18, 1985. Enquiries: Mr J. Stewart, The Herbarium, Royal Botanic Gardens, Kew, England.

Second NZ International Orchid Conference. Wellington, October 9-13, 1985. Secretary: Mr J. Addison, PO Box 5133, Wellington North, New Zealand.

Twelfth World Orchid Conference: Japan, March 1987.

Thirteenth World Orchid Conference: Auckland, New Zealand, 1990.

BOOK REVIEWS

Orchid Biology III

Biology is a philosophical frontier and much of what is being discovered has practical application for orchid growers. A few scientists, to our good fortune, have been able to specialise in orchid research. Too frequently in the past have valuable research papers been slow to flow through to those who can use the new information.

Communication is the key to such problems. For eight years now this need has been admirably met by the series of books *Orchid Biology — Reviews and Perspectives*, edited by Professor Joseph Arditti.

The third volume has just been published. It blends some general interest with a great deal of scientific material. Each chapter has appeal for specific groups, and much of what it presents will have practical applications for serious orchidists.

The first chapter is an intriguing self-portrait in words by Rebecca Tyson Northen. This chapter is a must for all who treat Mrs Northen's *Home Orchid Growing* as their orchid bible.

A quite remarkable contribution is made by Australian Len Lawler. His *Ethnobotany of the Orchidaceae* is fascinating. There is magic in it, and superstition too. In a recorded history of around 2,500 years orchids have been all things to all peoples: food, drink, ornaments, craft material — and much more.

Dr Albert Stoessel and Professor Arditti collaborate in a review of *Orchid Phytoalexins* — inhibitory chemicals which play a major role in symbiosis. They appear to be the nearest approach to an immune system in plants.

Flaskers will find useful information in the chapter *Physiology of Germinating Orchid Seeds* by Professor Arditti and Dr Robert Ernst. The coverage is wide. Just how effective are the various sugars as a carbon source for germinating orchid seeds? Which formulas are best for terrestrial orchids? How vital are vitamins? Hormones? Auxins? Cytokinins? Gibberellins? Enzymes? Nucleic acids? pH? Light? Laboratory workers will relish this data. However: "Reports that birth control pills enhance the growth of orchid seedlings have not been substantiated experimentally".

Dr Ernst and Dr Eloy Rodriquez are authors of a paper *Carbohydrates of the Orchidaceae*. This is virtually a treatise on metabolism which updates the considerable research of previous years.

Professor Bjorn M. Hausen of the Department of Dermatology, University of Hamburg deals with *Toxic and Allergenic Orchids*. You will be pleased to know that cases of poisoning from orchids are restricted to areas where they are used as nutrients or drugs.

A valuable chapter for cymbidium buffs comes from agricultural scientist Christopher Seth, and Dr Phillip Cribb of Kew. It is *A reassessment of the Sectional limits of the genus Cymbidium*, the most complete determination of the genus this century. It is a thorough study of intersectional relationships and will be a great help to hybridists.

As in the two previous volumes of this series there is tremendous value in the Appendix *Chromosomes in Orchids*. Professor Kamemoto of the University of Hawaii and Professor Tanaka of Hiroshima University, Japan, are the authors. This is essential reading for all hybridisers.

The book has been usefully indexed by the distinguished librarian Robert Hamilton, formerly associate professor at the University of British Columbia.

This volume is dedicated to Mak Chin On of Singapore, a prominent orchid grower famous for his helpfulness.

Orchid Biology — Reviews and Perspectives III. Edited by Professor Joseph Arditti, Department of Developmental and Cell Biology, University of California, Irvine. Comstock Publishing Associates, a division of Cornell University Press. Price $49.50 (US).

The easiest source is Twin Oaks Books, 4343 Causeway Drive, Lowell, Michigan, USA. Price includes surface mail.

IMPORTANT BOOKS

Lack of space has meant that important reviews have had to be held over until next issue. However, three books are highly recommended should you see them on sale: *A Book for Orchid Lovers* — a great new edition. *Cultivation of Australian Native Orchids* and *Orchids of Nigeria*.

SHORT REVIEWS

How to Grow Fuchsias by Brian and Valerie Proudley. A small but useful book which at most populated parts of Australia can be grown in glasshouse, shadehouse or in hanging baskets. Many are suited to garden beds. The history of their introduction into England makes interesting reading. Published by Blandford Press of Poole, Dorset.

Growing Bulbs by Martin Rix. This book starts with a wonderful account of the evolution of bulbous plants, followed by very practical ways of growing them well. Illustrated with fine pen drawings. Published by Croom Helm of London and Canberra. Available most book shops. Distributed by Aust. & NZ Book Co.

The first *Lycaste* hybrid flowered in 1878. It was made by W. Marshall of Enfield, England, using *L. skinneri* x *L. deppei*.

FOXFIRE ORCHIDS

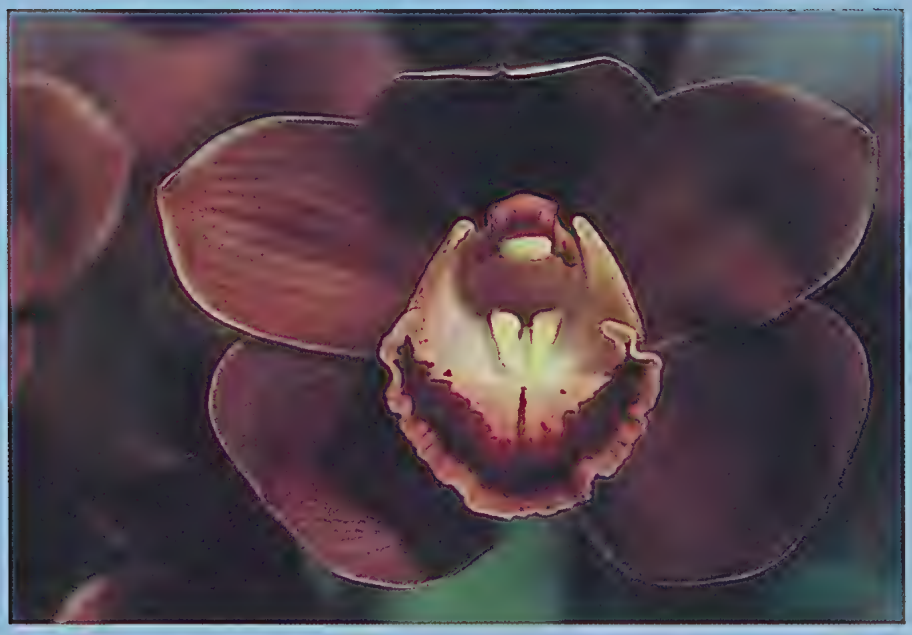


PETER ROCHFORT

PO BOX 247, BROADWAY, NSW, AUSTRALIA 2007

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Chocolada 'Mocha'

Champion Seedling Orchid of the 1984 OCSA Spring Show. 'Mocha' flowered early August with four upright spikes that barely needed staking. It carried 28 perfectly-arranged flowers — eight being the best count. We are proud to offer the following crosses:—

84.01 Chocolada 'Mocha' x Vieux Rose 'Dell Park'

'Dell Park' with its very tall spike and high count complements 'Mocha' ideally. Some bold colours with beautiful labellums should result. Definitely show bench. Tetraploid.

84.02 Chocolada 'Mocha' x Valya Craig 'Judy'

'Judy' is now proving to be a top parent, passing on its good spike habit and, with up to 18 flowers on the spike, is a perfect partner for 'Mocha'. Some very rich colours should result. Tetraploid.

84.03 Chocolada 'Mocha' x Wyanga 'Supreme'

This 'Supreme' is a suspect tetraploid, having tall spikes with good count. A most interesting cross for a wide range of colours.

84.04 Negrito 'Nutmeg' x Chocolada 'Mocha'

'Mocha' with its superior shape and substance should perform magically with this Negrito. 'Nutmeg' displays itself on long arching spikes with very high count and, being a beautiful dark tan with a solid red lip, interesting things must result. Triploid.

TERMS: Flasks of 25 well-grown plants — $40. Mini-flasks of 10 — $20.
Expected delivery times, approximately three to six months from receipt of order. All orders met in order received and are freight extra. Please do not send payment with order.

Please Note: *The above and the listings in advertisement on page 308 are but a few of the crossings on offer. For a more comprehensive listing write to:*

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ANNUAL GENERAL MEETING

Australian Orchid Council

The 24th AGM of the Council was held on September 13, 1984 at the Southern Cross Hotel, Melbourne. The president, Mr C.F. Hill, opened the meeting and welcomed all present. A minute's silence was observed in memory of the late Mr Athol Bell who served the council for many years and was famous as a hybridist.

Many matters on the long agenda were held over for further consideration by each State.

Some important judging changes were agreed upon:—

Spathulata (syn. Ceratobium) and intermediate-type dendrobiums will now be judged by the appreciation method.

Cattleyas. The rear view must also be photographed.

Miniature cymbidiums. The first sentence of the written standard is deleted, namely the words "The plant is to be judged and it must be miniature irrespective of parentage" no longer apply.

Vandaceous standard. A new standard is to take effect to this alliance. It will cover both small and large vandaceous, except phalaenopsis. It is based on a draft submitted by NSW which incorporates a matrix scale combining size and floriferousness. This allows the same number of points for a small number of large flowers as for a large number of small flowers.

Paphiopedilums. Consideration of a suggested new standard has been deferred.

Native terrestrials. These are to be judged by appreciation. Western Australia is to present ideas for a cultural or botanical certificate for these orchids to the next AGM.

"Novelty" cattleyas. There was discussion over the term novelty. No State likes the term but no one can suggest a better one. This has been left for each State to decide.

Australian Conference Show Awards. For award judging at future AOC Conference shows all available Australian judges will participate and such awards will automatically be AOC Awards.

National judging. It was agreed that it was desirable to hold an annual conference of State registrars each year under the direction of the registrar-general.

Elections. Officers elected are the same as last year except that the vacancy for a second vice-president has been filled by Mr J. Woodward of Tasmania. Mr Woodward is a valuable addition to a strong team of officers.

The meeting closed with a vote of thanks for the hospitality of the Victorian Orchid Club.

AOF SEED BANK NEEDS SEED

Now that the spring-flowering flush is over you may have found you have pollinated more seed than you can handle. Don't waste it. Send it to the Australian Orchid Foundation's Seed Bank.

It is vital to preserve rare and endangered species. Seven species are on the totally-protected world list. They are *Cattleya skinneri, C. trianae, Didiciea cunninghamii, Laelia jongheana, Laelia lobata, Lycaste virginalis* var. *alba, Peristeria elata, Renanthera imschootiana* and *Vanda coerulea.*

Seed or green pod should be wrapped in clean paper (never plastic material and enclosed in a small box or strong envelope and sent to Mr Graeme Banks, Curator — Orchid Seed Bank, 183 Windsor Road, Northmead, NSW 2152.

Never so cheap

Devaluation will make a trip to the Second New Zealand Orchid Conference in October 1985 a bargain for Australian growers. It starts on the ninth and goes through to October 13. Plan to stay on for a few weeks to see the wonderful sights in both islands.

This second conference is building upon the enormous success of the first conference in 1980 enjoyed by 800 registrants.

The conference takes place at Wellington, New Zealand's capital. Facilities are first class and New Zealand hospitality is very warm.

The hobby is now booming in New Zealand and there are over forty very active societies, some of them very large.

Register your name now with the secretary for progress data and registration details. Mail to: The Conference Secretary, PO Box 5133, Wellington, New Zealand.

HOT POT TIP

Ensure your plant's name-tag is legible enough to read without removing from the pot. This prevents root damage, as often happens when replacing a tag, or misidentification by accidentally placing it back in the wrong pot. Another safety move is to mark the breeder's number on the side of the pot as well as the reverse side of the tag.

Maurie Black

TOWNSVILLE SHOW WINNER

On page 196 of the September issue Mr Bob Mayoh's clever display was referred to as the winner of its class. Mr D. Hampton of Cairns points out that his individual display won first prize. Apologies Mr Hampton and congratulations. Both displays were lovely.

Mendel's laws made it possible to assess probable traits in a large population. He showed that when two genes were paired in a new generation, only one would be expressed. Hence this factor would be dominant in most progeny.

A FEAST FIT FOR A COW

TED GOGERLY

Quite a few years ago, a friend of mine (who, it will be seen, is not a dyed-in-the-wool orchid crank) was wandering through Sydney's Paddy's Market, when he came upon a stall selling Australian native plants. On impulse, he bought two bare-root plants of *Dendrobium falcorostrum* at a total cost of two dollars. On arriving home, he realised that he had no orchid-potting mix but, undeterred, he scraped up some rotted-down she-oak needles and potted them up in that.

The hardy little critters not only survived but, aided by an occasional watering and an extremely occasional light feed of a complete fertiliser, eventually flowered. One of them was, in my opinion, the best native orchid flower I had ever seen. The owner expressed mild satisfaction at the result of his purchase but showed none of the wild enthusiasm that would have been mine had I been lucky enough to be in his position.

When the plant flowered again the following year,I persuaded my friend to enter it in a quite prestigious show, in which it was duly adjudged Champion Australian Native Orchid. Once again, the owner was mildly gratified but showed no great interest — not even in the fairly substantial prize money, which he donated to the local orchid society for the purchase of native orchid seedlings for distribution to junior members.

Year after year, I watched with envy as that plant flowered, and even day-dreamed about it in between flowerings. It grew slowly but without any great vigour and, in fact, looked rather forlorn, out under the trees, in the owner's backyard. I don't doubt that I hinted often enough that I would like a piece of it, but it was never offered; not because of any stinginess on his part, but because it simply did not occur to him that a mere orchid would mean so much to anybody.

Eventually, my friend decided to leave the district and move to the country. In sheer desperation, I said to him one day, "Are you going to give me a piece of that plant as a going-away present?" Without hesitation, he replied, "Why not? Help yourself"; which I did, generously — taking eight bulbs, representing about one-third of the total growth.

Figuring that the plant had grown used to a diet of she-oak needles, I used that as the main ingredient of my potting mix, adding some crushed rock and pine bark. Applying a little Osmocote and offering a fervent prayer, I left the plant to do its part. After a weak flowering, eight new shoots developed and, a year later, the number of bulbs again doubled.



***Dendrobium falcorostrum* 'Anembo', AM/AOC-NSW**

A feast fit for a cow.

The flowering in 1983 was so pleasing that I gave the plant the varietal name 'Anembo' and nominated it for an award. In due course it was accorded an Award of Merit by the Orchid Society of NSW and, subsequently, by the Australian Orchid Council.

At the first opportunity, I let the former owner know of the distinction which had been conferred upon his plant. With his customary aplomb, he said that he was pleased for me, adding, "If you have some to spare one day, I wouldn't mind getting a piece from you: a cow got in and ate mine — just left the roots".

He will get his piece, of course, but not so another friend who also wants a piece because, and only because, "it's got the most beautiful perfume I've ever smelt". (He'll get a piece of another "rose" that smells as sweet).

This experience brings to the fore the question of what one should do if and when one comes into possession of a superior clone, whether it be a seedling, a freak mericlone or an outstanding form of a species. Over the years, I've seen a number of amateur growers who have "fluked" a seedling of high quality. Some of them have experienced such euphoria that they've not had the heart to cut the spikes and let the plant get on with the job of growing; with the result that they've lost it — gone for ever.

There are a number of "insurance policies" available and, the more of them that are taken out, the better the chance of ensuring survival. Some that occur to me are:—

(a) **Divide the plant** — so that you have at least two pieces going for you;

(b) **Have a "growing-mate"** — and get a piece to him in the hope that, under his conditions, it will escape any disaster which may befall

your collection (fungus attack; virus disease; theft; destruction by hail; the depredations of such nasties as snails, slugs, dendrobium beetles and even cows, yet — the mind boggles at the range of possibilities);

(c) **Have the plant mericloned** — but don't place all your eggs in this basket because, despite the great advances in laboratory techniques in recent years, there is still no guarantee that the tissue will "take".

Ownership of a special plant is not only a source of pride and satisfaction: it also carries with it the responsibility of ensuring its well-being and propagation — but what a welcome responsibility it is!

35 Anembo Road, Berowra, NSW 2081

BRISBANE OS CHARITY EFFORT

Phyllis Cotton reports that the Brisbane Orchid Society's Autumn Show raised a further $3,000 for the Queensland School of the Deaf. This brings to $24,120 the amount the society has raised for charity.

The 1985 Charity Show will again be held at Zupp's Motors on Saturday 30 and Sunday, March 31. It will be an open show so be in it. Details from Phyl Cotton, phone 398 3639 or write PO Box 94, Stones Corner 4120.

Another worthy project by this society is to supply blooms to the terminally-ill patients at Mt Olivet Hospital, Kangaroo Point. The flowers are used to dress up the wards and chapel and some are given to individual patients and staff.

The Toowoomba boys who bring their flowers down for the QOS Show are great guys, they always manage to cut off many spikes and leave them for the hospital. Many of the patients are there for a long time and some are quite young. Flowers, other than these orchids are rarely given to them.

What a wonderful after-the-show gesture.

ANOS — NORTH COAST BRANCH

The North Coast Branch of the Australasian Native Orchid Society is centred on Ballina, NSW where meetings are held on the first Thursday of the month at the Ballina High School, Swift Street entrance, at 8 pm.

The group is now producing a fact-packed monthly newsletter under the editorship of John Moye and Mike Symmons. Dennis Lynch is president and there is an established library run by Marg Kirkland. To join or visit contact secretary Graham Gamble, 14 Fischer Street, Goonellabah. Phone 24 1023.

New catalogues received

Castalia Orchid Stud. Seven foolscap pages of cattleyas and softcane dendrobiums. Half the cattleyas are imported crosses and most are available in one, two or three growth sizes. All the dendrobiums are local crosses of some interest. Siblings of *D.* Yukidaruma 'King' x Yukidaruma 'Queen' should be worth a punt. Get your copy from Adrian Shortall, 1a Nieuport Avenue, Milperra, NSW 2214.

Lonnes Orchid Nursery. Many genera in latest 1984 list. Strong on paphiopedilum species. A few native and New Guinea crosses. PO Box 1059, Cairns 4870.

Burleigh Park Orchid Nursery. Big range of species. Also Nepenthes (Pitcher plants). Some attractive cattleya and dendrobium hybrids. Ian Walters, 1419 Ross River Road, Kelso, Townsville 4815.

Sunshine Orchid Nursery. Big range of flasks and seedlings and many mericlones. Some natives. Huge range of orchid accessories. Address, 2034 Roghan Road, Bald Hills, Brisbane 4063.

Valley Orchids. Dozens of fine cymbidiums shown in colour. A must for cymbidium buffs. Get your copy from Valley Orchids, PO Box 220, Morphett Vale, South Australia 5162.

Flora Culture Pty Ltd. Announce standard-type cymbidiums bred for bulb and leaf sizes similar to miniatures and flower sizes akin to intermediates, with potential for the cut-flower trade. Worth investigating. Covers also minis and intermediates, equitant oncidiums, odontoglossums and cattleyas. A few miscellaneous. W.L. Hargrave, PO Box 5078, Toowoomba 4350.

"Double U" Orchids. Some very good native crosses. Interesting exotic species. Paphiopedilum primary hybrids and a big range of miscellaneous hybrids. Wal Upton, 71 Wesley Street, Elanora Heights, NSW 2101.

Glenwood Orchids. Seedling flask list for cymbidiums, cattleya alliance and a few softcane dendrobiums. A few mericlones. Copies from 18 Dandenong-Hastings Road, Cranbourne Rural, Victoria 3977 or agents.

Adelaide Orchids Pty Ltd. June supplementary list. Mainly cymbidium mericlones and some quality divisions. Some interesting miscellaneous. PO Box 1, O'Halloran Hill, South Australia 5158.

Mick Ryan Orchids. Good range of minicyms and standards. Also cattleya, oncidium alliances, softcane dendrobes and other genera. Some supplies. Send stamp to 5 Taunton Avenue, Enfield, South Australia 5085.

Simon Lenkic Orchids. Good cymbidiums. Outstanding zygopetalum crosses. Some colour. Worth examining. Enclose stamp to 41 Saturn Crescent, Modbury North, South Australia 5092.

Hope Island Orchid Nursery. A mail-order nursery with an impressive range. PO Box 52, Oxenford, Queensland 4210.

Mackinney's Nursery. Impressive range in all genera, including many interesting species. Some Vacherot and Lecoufle seedlings. 87 Turton Street, Sunnybank, Queensland 5109. Good cymbidiums. Geyserland Orchids agent. Some natives and odontoglossums. RSD 92, Three Bridges, Victoria 3797.

Deane's Orchid Nursery. Vital list for the mixed-collection grower. 29 Hemers Road, Dural, NSW 2158.

L.T. & M.K. Nesbitt. Catalogue of native deciduous terrestrial orchids. A must for native growers. 18 Cambridge Street, Vale Park, South Australia 5081.

TOWNSVILLE'S GREAT CONCEPT

The Townsville Orchid Society is right behind a project for a Townsville community horticultural complex. A steering committee has been formed and although all members belong to TOS it is not a formal part of the society because the intention is that the project be community oriented, not society oriented. Best of luck Townsville.

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FERTILISERS AND FLOWERING OF ORCHIDS

DR NOEL J. GRUNDON

Introduction. In many popular gardening magazines, articles on the effects of fertilisers on growth and flowering of plants contain statements such as ". . . use potassium to obtain flowers . . ." or ". . . high nitrogen encourages vegetative growth at the expense of flowers . . .". Similar statements can be found in popular orchid journals. These articles have led many growers to believe that flowering in orchids is controlled by adding or leaving out one or more fertilisers from their feeding programme.

For example, there are cymbidium growers who use a high nitrogen:low phosphorus:low potassium fertiliser during summer, then change to a low nitrogen:high phosphorus:high potassium fertiliser in autumn in the belief that this programme "sets the flower spikes". I am prepared to bet that these growers choose their fertiliser programme because they obtained more flowers when they first used it. Now I can hear you thinking, "But doesn't that prove that fertilisers control flowering? I used a certain feeding programme and got more flowers!" Be careful; the key worked in that statement is "more" — you obtained "more flowers" not "flowers for the first time".

The belief that fertilisers control the setting of flowers is based more on folklore than on experimentally proven facts. I can find no scientific experiments in the popular or scientific journals which show that the setting of flowers in any plant, including orchids, is controlled by the application or omission of any fertiliser. Therefore, fertilisers have no direct control over the setting of flowers. However, there are many scientific experiments which show that fertilisers have a large effect on the number and size of flowers produced.

What controls flowering? What decides if an orchid should flower? Look around the shadehouse and note when your orchids flower. Some genera flower in one season only while others flower throughout the year. This seasonality of flowering is more noticeable in species than in hybrids where man has attempted to extend the flowering time. Thus, cymbidiums flower mainly in winter and spring, paphiopedilums mainly in winter, miltonias mainly in summer, varicosum-type oncidiums and hardcane dendrobiums mainly in autumn, while vandas flower at any time.

There must have been some advantage in survival of the species for mother nature to have evolved this seasonality of flowering. So what controls the programming of flowering on a seasonal basis? In the coastal regions near the equator, there is little difference between summer and winter and the orchids which have evolved in these conditions usually flower at any time of the year. Vandas derived from *Euanthe sanderiana* are good examples of this group.

In mountainous areas near the equator, summer differs from winter by being hotter and orchids which have evolved in these regions have developed methods of detecting differences in temperature. The phalaenopsis and paphiopedilums represent this group.

In the temperate and polar regions, summer is hotter and has longer days than winter and orchids which have evolved in these regions have developed ways of detecting differences in either or both temperature and the number of hours of sunlight (ie the length of each day or daylength). Cymbidiums and dendrobiums are representative of those which detect differences in temperature only, while miltonias can detect differences in daylength only. Cattleyas detect differences in both temperature and daylength.

Orchids which flower on a seasonal basis use the differences in temperature or daylength to turn on or turn off their flowering mechanism.

Juvenile phase — a pause to grow. Orchids do not usually flower on their seedling growths. Like all other plants, orchids must reach a certain stage of maturity before they are sensitive to the stimulus that will turn on their flowering mechanism. In other words, an orchid must go through a juvenile phase before it reaches a size where it is "ripe to flower". The length of the juvenile phase is different between genera and even between seedlings from the same pod. Good culture, including an adequate and balanced fertiliser programme, can shorten the length of the juvenile phase. However, the minimum length of this phase is probably controlled by the genes of each individual plant and no amount of jiggery-pokery by us will decrease it below this minimum length.

Stages of flower development. A vegetative shoot consists of a stem and attached leaves. A flowering shoot consists of a stem and the attached bracts, sepals, petals and reproductive organs of the flower. In fact, a flowering shoot is just a highly-modified vegetative shoot. The bracts (small green leaf-like growths which occur on the flower stem), sepals, petals and reproductive organs are modified leaves. Both the vegetative shoot and flowering shoot arise from bud primordia which are identical as far as we can tell. Thus a bud primordium may give rise to

either a vegetative shoot or a flowering shoot.

To produce a flowering shoot with open flowers from a bud primordium, a plant passes through three stages:

(a) The induction stage where a "flowering hormone" is induced in the leaves of the plant and passed to the bud primordium where flowers will develop;
(b) The initiation stage where the "flowering hormone" initiates the development of a flowering shoot instead of a vegetative shoot at the bud primordium;
(c) The development stage where the flowering shoot develops flower buds and the stem lengthens and the flowers open.

Whether each stage is carried through to the next depends on the environment. Too high or too low a temperature, lack of water or nutrients or not enough sunlight can cause any stage to be aborted. Each stage has its own set of favourable environmental conditions and those which are favourable for the induction stage may be completely unfavourable for the development stage. For example, the induction and initiation stages occur in *Cymbidium pumilum* when the minimum temperature is higher than about 13°C, but the development stage needs minimum temperatures near 0°C followed by temperatures higher than about 9°C before flowers form and open.

How temperature affects flower initiation. When temperature affects the induction and initiation stages, it is usually a low temperature which is required. Thus, cymbidiums, dendrobiums, phalaenopsis and paphiopedilums set their flowers when they have received a certain number of nights with temperatures below a critical temperature. The critical temperature is different between genera and may be different even between species and hybrids within genera. Phalaenopsis and paphiopedilum usually initiate flowers after 2-3 weeks of night temperatures below about 14°C. In hardcane dendrobiums, the critical temperature is about 18°C, while in softcane dendrobiums it is about 13°C.

In cymbidiums, the situation is more complex. Some reports suggest that initiation occurs after three months of night temperatures below 13°C, while others suggest that the critical temperature may be 8°C. However, other experiments show that initiation will occur when the minimum temperature does not fall below 25°C. The common feature in all these experiments was that flowers were initiated when there was a difference of about 10°C between the day and night temperatures and that this differential must occur when the developing bulb is just beginning to mature.

Initiation of flowers in cattleyas usually depends on both low temperatures and daylength. However, the daylength requirement of some species is modified by low temperature. To complicate it further, the modifying effect of temperature on the daylength requirement is different between the cattleya species. Thus the behaviour of hybrid cattleyas can be very different, even between seedlings from the same pod.

How daylength affects flower initiation. On the basis of their response to daylength, orchids can be divided into three groups:

(a) Short-day plants which require days shorter than a critical maximum number of hours of sunlight. In reality, these plants measure the length of the night and so flower when the nights are longer than some minimum number.
(b) Long-day plants which flower when the days are longer than some critical minimum number of hours of sunlight (ie when the nights are shorter than some maximum number).
(c) Day-neutral plants which flower in any daylength.

Cattleyas and their hybrids with species from allied genera are examples of short-day plants. However, *Laelia purpurata* may be a long-day plant. Other examples of long-day plants are *Miltonia anceps, roezlii* and *spectabilis* and *Odontoglossum bictonense.* Vandas and many species of bulbophyllum and polystachya are day-neutral plants.

The role of fertilisers in flowering. Fertilisers have no direct role in controlling flowering. However, a correctly-balanced fertiliser programme can decrease the length of time taken for seedlings, mericlones or divisions to flower for the first time. Fertilisers also affect the number and size of flowers produced.

The correct programme provides all the mineral nutrients needed by plants for healthy growth. These nutrients are nitrogen (as nitrate or ammonium), phosphorus (as phosphate), potassium, calcium, magnesium, sulphur (as sulphate), iron, boron, zinc, copper, manganese, molybdenum (as molybdate), chlorine (as chloride) and sodium. A balanced programme aims to supply these nutrients in approximately the same ratio as they are needed by the plant. Thus, a correctly-balanced programme would aim to provide the nutrients in the following ratios — 1 molybdenum: 60 copper: 200 boron: 200 zinc: 500 manganese: 1,000 chlorine: 1,000 iron: 10,000 sulphur: 20,000 magnesium: 20,000 phosphorus: 50,000 calcium: 100,000 potassium: 140,000 nitrogen.

To be of maximum benefit, the fertiliser should be applied when the plants require it; that is fertilise plants only when they are producing new shoots, leaves and roots. Commercial fertilisers are the most obvious source of nutrients, but the water and compost can also supply many

TABLE 1. FERTILISER PROGRAMME FOR ORCHIDS

A. Use tank water on good-quality well, bore or stream water to make up the fertiliser solution.
B. Feed regularly; each week or twice per week.
C. Water heavily once per month to remove excess salts from the compost.
D. Make up the fertiliser solution as follows:

Fertiliser	Grams Per 200 Litres		
	Small Seedlings	Sub-adult Plants	Adult Plants
Monoammonium Phosphate (MAP)	2	5	10
Potassium Nitrate	12	30	60
Calcium Nitrate	20	50	100
Magnesium Sulphate	10	25	50
Iron Chelate (FeEDTA)	0.6	3	6

of the nutrients required. In most instances, the compost and water will supply all the boron, chlorine, copper, zinc, manganese, sodium and molybdenum needed by the orchid, but additional nitrogen, phosphorus, potassium, calcium, magnesium, sulphur and iron will be needed.

Fertiliser recommendations. It is impossible to give one magic formula which will make everybody's orchids thrive. To correctly balance a fertiliser programme the amounts of nutrients supplied by compost and water must be known. Therefore, most fertiliser programmes assume that the compost and water provide no useful nutrients and aim to supply all the plant's requirements from commercial fertilisers. This approach can be quite wasteful since many water supplies contain useful amounts of calcium, magnesium, iron, copper, zinc, manganese, boron, sodium, chloride and molybdenum. An analysis of the water supply would soon reveal if these nutrients are being supplied in sufficient quantities. If the water contains at least 40 ppm calcium, 20 ppm magnesium, 2 ppm iron and 0.1 to 1 ppm of boron, zinc, copper, manganese, sodium or chloride, you will probably not need to supply any more of these nutrients.

Most complete, soluble, commercial fertilisers provide sufficient nitrogen, phosphorus, potassium and iron (sometimes the trace elements also), but are low in magnesium, sulphur and calcium. Extra calcium, magnesium and sulphur can be provided by feeding with epsom salts (magnesium sulphate) and mixing a small amount of agricultural lime (calcium carbonate) or dolomite (a mixture of calcium carbonate and magnesium carbonate) into the compost.

Many people have successfully tried the formula suggested by W.R. Johnson. This formula is based on his own experience and on scientific studies undertaken by Poole and Seeley in the USA. If you are using this formula, be aware that Poole and Seeley used a compost of glass beads which would provide no nutrients. Furthermore, they supplied their nutrients every day and so needed to use only a dilute solution of the fertiliser chemicals. I prefer this approach to fertiliser application; a little fertiliser often rather than a big gulp once a month or so.

I would recommend Johnson's formula to you as a good starting point for your own experimentations. If you wish to try another, Table 1 shows one I have found to be useful for cymbidiums and Australian natives grown in a compost based on pinebark, perlite and gravel, and for equitant oncidiums grown on slabs of natural cork.

FURTHER READING:

Chong Jin Goh, M.S. Strauss & J. Arditti (1982). "Flower Induction and Physiology in Orchids", pp 215-241. In J. Arditti (ed), *Orchid Biology: Reviews and Perspectives, II.* Cornell University Press, Ithaca.

S. Kako & H. Ohno (1980). "The Growth and Flowering Physiology of Cymbidium Plants". *Proc. 9th World Orchid Conference Bangkok (1978),* pp 233-241.

A. Klougart (1973). "Cymbidium Flower Initiation and Development". *Gartner Tidende 89:* pp 405-408.

H.A. Poole & J.G. Seeley (1978). "Nitrogen, Potassium and Magnesium Nutrition in Three Orchid Genera". *J. Amer. Soc. Hort. Sci. 103:* pp 485-488.

H.A. Poole & T.J. Sheehan (1982). "Mineral Nutrition of Orchids", pp 195-212. In J. Arditti (ed), *Orchid Biology: Reviews and Perspectives II.* Cornell University Press, Ithaca.

G.B. Rotor, Jnr (1952). "Daylength and Temperature in Relation to Growth and Flowering of Orchids". *Cornell University Agric. Exptl. Stat. Bull. 885:* pp 3-47.

G.B. Rotor, Jnr (1959). "The Photoperiodic and Temperature Responses of Orchids", pp 397-417. In C.L. Withner (ed), *The Orchids: A Scientific Survey.* The Roland Press Co, New York.

S. Vacharotayan & S. Kreetapirom (1980). "Effects of Fertilisers Upon Growth and Flowering of Dendrobium Pompadour". *Proc. 9th World Orchid Conference Bangkok (1978),* pp 75-82.

4 Jean Street, Toowoomba, Queensland 4350

The world's first great Orchid Conference

During Wednesday to Saturday, March 20 to 23, 1985, the Royal Horticultural Society is to celebrate the centenary of the first orchid conference ever held.

On the Monday before the 1985 Centenary Orchid Conference there is to be an orchid symposium at Kew during which registrants will hear of the latest developments in orchid science, and see aspects of the great herbarium and the historic library. If in England don't miss these wonderful events. See the end of this account for details.

In a preface to the published report of the first conference the then honorary secretary of the RHS, a Mr Mason, wrote:—

"The orchid conference, organised by the Royal Horticultural Society, may be considered as one of the greatest successes ever known in floral exhibitions, and one, moreover, with a special object in view, every point in which was brought to the desired conclusion. There was an extensive and splendid show, lasting two days, and also a conference, at which the attendance of orchid growers was numerous and influential, and tended much to advance the objects of the society, viz, to exhibit a representative collection of orchids in flower, together with any other objects desirable for their culture, and to spread a knowledge of their habits and requirements.

"The exhibition was marked by a beautiful display of rare and showy orchids, many of them being very large specimens; in fact, the greatest number of new and fine orchids ever assembled at one show in this country were here displayed."

Professor Reichenbach provided three papers for the conference, but not his presence. No doubt these were of prestige value to the conference but they are of little interest today.

The most historically-valuable paper was given by Mr H.J. Veitch, FLS, titled "On the Hybridisation of Orchids". It was the Veitch nursery, of course, where the first successful hybridising of orchids took place. The story is of great interest and will be published in a coming issue.

A Mr James O'Brien gave an extremely long paper "On the Cultivation of Orchids" which clearly shows that the art of hobby growing had been mastered by 1885. That is if you could employ a good gardener or two.

And what orchid conference would be complete without a discussion on nomenclature! This was a free-for-all under the title, oh yes, "Discussion on Orchid Nomenclature". Unluckily it fizzled out because of the absence of the Great Authority Professor Reichenbach.

But the subject which really stirred growers, and no doubt brought twitches to their nostrils, was the item "Discussion on the Use of Manures in Orchid Growing". This epic is dealt with at length elsewhere in this issue.

F.W. Burbidge, Esq, FLS described the plants on exhibition. He was impressed by the mass effect: "The six or seven hundred plants exhibited were arranged on tables down the centre of the great conservatory, thus giving a vivid mass of colour amid the greenery afforded by the ordinary occupants such as palms, ferns, dracenae, etc.".

In the RHS Journal Burbidge describes nearly every plant in detail. Only a very few were Australian. He mentions that Sir Trevor Lawrence showed "two very interesting Australian species, but rarely seen in collections, *Dendrobium smilliae*, with a large tuft of small rosy flowers with a green tip, borne at the end of a large pseudobulb; and *D. tetragonum*, first found by Allan Cunningham. This plant is remarkable for its four-angled pseudobulbs and its starlike whitish flower with narrow accuminate petals and sepals . . . suggesting a mimicry of the spider orchids of Australia.

"Sarcochilus Hartmanii [sic] was one of the few Australian orchids shown."

AOR is indebted to the Librarian, Lindley Library, Royal Horticultural Society, for permission to use excerpts from Vol. VII — No. 1 of the *Journal of the RHS* which contains a full report of the 1885 Orchid Conference.

Enquiries regarding registration should be addressed to: The Secretary, International Centenary Orchid Conference, PO Box 313, Vincent Square, London SW1P 2PE.

The one-day symposium at Kew will be held on Monday, March 18, 1985. A nominal fee of $5 covers cost of refreshments and postage. Enquiries should be directed to Mr J. Stewart, The Herbarium, Royal Botanic Gardens, Kew.

SUNSHINE COASTERS LOVE ORCHIDS

The Sub-Tropical Orchid Council co-ordinates the activities of a wonderful group of orchid societies on the Queensland Sunshine Coast.

This area is ideal for all except the coolest-growing orchids, consequently every little town there seems to have an orchid society.

Current president of the STOC is Mr J. Rees of Gympie where there's still gold to be found but mainly in the orchid flowers. Treasurer is Mrs M. Heyer of Maroochydore. If you live around there and grow orchids but aren't a member of a society then contact secretary Mr A. Pearce, PO Box 23, Palmwoods. Visitors will find Mr Pearce helpful, too.

A couple of years ago the Council published an excellent review of the genus *Paphiopedilum*. There's a grapevine rumour that a few of these are still available at a modest price.

The use of manure in orchid growing

Being excerpts from the proceedings of the 1885 Orchid Conference by kind permission of the Royal Horticultural Society.

Way back in 1885 at the first International Orchid Conference the subject of manure for orchids was considered a little indelicate — somewhat "on the nose" as we might express it today.

The use of animal manures for field crops had been soundly established in England for hundreds of years so it was natural for some growers to think they would be of benefit to orchids. In fact at the time of the 1885 conference extensive and quite scientific tests on fertilisers had been going on for 35 years. Thus the discussion on manures, in many aspects, sounds quite modern. The 1885 discussion below is printed in roman type, and comments in the light of modern knowledge, printed in italic. The chairman was Sir Trevor Lawrence.

Note that the nomenclature has not been modernised.

The Chairman: I have just had laid before me the question of — what shall I say? — the question of the use of manure in the cultivation of orchids. Now all manures are composed more or less of substances of an aciduous nature, but I have had one kind of manure brought to my notice which is quite free from acid of any kind. It is the fish manure of Messrs Jensen and Co, of which firm Mr Alfred Borwick, who is a member of our society, and who I hope is here today, is one of the proprietors. I should like to call upon Mr Borwick, if here, to tell us something of the experience he has had in the cultivation of orchids with this particular kind of manure.

Mr Alfred Borwick then rose and said: I have some difficulty in complying with the request of the chairman in this matter, because the idea of anything like manuring orchids is horrible to most orchid growers. It has often been a source of regret to me to see so many orchids dwindle, if not possibly pass out of existence, after they have heavily flowered, not from any want of care or devotion, for that is generally in excess of the demand, but apparently from a deficiency of strength, or in other words a species of starvation. I am led to think this must be the case from information conveyed by travellers and collectors, that birds throng the trees upon which orchids are found, and that they supply in their dung a rich diet, containing, as it does, ammonia, phosphoric acid and some potash, which is washed by the rains and dews into the interstices of the trunks, so that the plants not only enjoy the advantage offered by residence on living trees, but the stimulant and food provided by the birds. Terrestrial orchids in the same way have the benefit of decaying vegetation, which supplies stores of ammonia. As soon as plants come into house cultivation, there is at once an end to these rich manurial provisions, and they have to depend upon moss, peat, charcoal and crocks, with possibly occasional charges of liquid manure, for their subsistence. In all the soils and ingredients used for potting orchids there is little trace of potash or other manurial constituent, and nothing goes to promote the development of fibre in plants like potash. The aim is to produce bulbs of largest size and firmest growth, but that is impossible unless there are healthy roots in abundance, and these roots can obtain a sufficient amount of nourishment to supply the fibres, of which the bulbs mainly consist. The manure which I have used for some time is that of Messrs J. Jensen and Co, 10 St Helens Place, EC, who are engaged in the manufacture of fish manure at the Loffoden Islands, the seat of the great Norwegian cod fisheries. When I tell you that this year no fewer than 32,000,000 of large fish were caught, you can form some slight idea of the magnitude of the fisheries. The fish are gutted, the bodies salted for food, the livers go to make oil, while the heads and backs are available for manure. They are dried, pulverised and reach England in the form and condition of flour. The average manurial constituents of dried cod-fish are 10.60 ammonia and 30 phosphates. Grand as these ingredients are in themselves, they are wanting in one thing, namely, potash. If this is absent, it is impossible to obtain perfect fertilisation; wherever it is present in due degree, the effect is astonishing in the vigour and rigidity of plant growth. Refined salts of potash and magnesia are added to the fish manure, and at once produce a perfect fertiliser of similar constitution to bird dung, and containing the essential constituents of ammonia, phosphoric acid and potash, in the form most available for plants. In this manure there is no acid used; fishbone is very gelatinous and when sufficiently pulverised dissolves in the soil, so none is needed. Seeing, as I did, the effect of this combination on all pot plants, it struck me that orchids might like it also. Last August I began to experimentalise upon a plant of *Cymbidium Lowii*, and requested my gardener to put half-an-ounce on the soil. We soon observed a darker colour in the foliage; in four or five weeks two strong growths appeared, which proved to be flower spikes; as they grew more fish, potash was added from time to time.

Since then there are five breaks, four of them of strength sufficient to content anyone. I then ordered its use for all terrestrial orchids, lycastes, calanthes, sophronites, phaius, zygopetalums, odontoglossums, masdevallias, dendrobiums and even for oncidiums and laelias. So far, vigour seems to be on the ascendant, and I see no reason whatever to retire from the line taken up or to alter my views. The plan of operations is simple. My gardener uses more peat round the sides of the pots, and he merely dusts the peat with a pinch of the manure, and wherever the fish potash is ,there the roots work. Mr William Bull told me a fortnight ago that it was a vexed question as to what extent manures could be used for the cultivation of orchids, and one which demanded the consideration of growers. The manure to which I have alluded is very easily obtained and applied. I would not recommend anyone to make trials, except on plants of little value, and then no harm can be done. If it is found serviceable in the way indicated, there will then be time to consider a wider application. (Applause).

So fish emulsion for orchids is not such a new idea after all. We now know that Mr Borwick's idea was perfectly sound.

The Chairman: I do not know whether any cultivators of orchids here have ever ventured to try any manure on their plants. I have never heard of its being done, but if any gentleman here has made the experiment we shall be very glad to hear what he has to say.

Mr Harvey: I did once try an experiment with manure on a *Cymbidium Lowii,* but I very nearly killed it.

Mr James: For some years past we have been in the habit of using pure horse urine, after it had been diluted, on many orchids, and we have always found that, when used, it has proved very beneficial, especially in the growing season. We are using it largely for damping the stages and paths at night, when a heavy dew quickly arises.

It is now well established that fowl, cow and manure from mares is rich in ovarian hormones which have growth elements such as peptides and triacontanol. Urine from a mare is particularly rich. The difficulty is that it is variable among animals and therefore accurate assessment of optimum amounts is not possible. Still, no doubt many Victorian gardeners learnt the right proportions by trial and error and zealously guarded their secret.

I think, if we take into consideration what Mr Borwick has already hinted at, the fact that plants invariably suffer extremely after carrying their heavy spikes, it seems to impress one with the thought that there is some necessity for sustaining the strength. The question has been raised of late years as to whether orchids benefit by having their spikes removed after they are formed. I have no doubt in my own mind that it is a marvellous advantage if you want to gain strength in the plants. I have an instance of the *Odontoglossum Alexandrae.* Two years ago we took very special care of it as being an extra good one. Somehow a small slug got into it and ate the spike out and it at once began to make two bulbs, but most unfortunately the spikes got eaten out of the two bulbs. The result has been that this year it has made a double growth from each bulb, and now it has four heads to the plant, and, marvellous to say, it has sent up nine spikes to the flower, an instance which I have not seen before in an *Alexandrae.* One bulb has three spikes on the side of the double leaf. I take it for granted that this must be merely a question of strength from raising the plant, which was a moderately strong one. Further, I think, that as regards the question of some kind of nutriment, it is not so much a question of what kind is applied, but rather of how it is applied. If you drench the flowers with pure horse urine diluted and use it in watering, it benefits the plant, because from the constant moisture going up in the growing season, the plant must take in the ammonia which is constantly rising. With reference to syringing, I do not think that all our friends would have agreed with Mr O'Brien in never using the syringe, and I think that statement would require qualification. We have always used weak liquid manure on the surface of the plants, and a moderately good practical rule is not to use it strong enough to injure the flower. I do contend that the syringe is beneficial in the growing season, especially when the nights are genial and there are no frosts. I think that manure is quite beneficial, and I have satisfied myself on the matter with reference to the many different things we have used. The difficulty which many meet with in using artificial manures, and which I myself have met with, is that of beginning by applying it too strong. Whenever people begin to use it they begin with it too strong. If they would only use it weaker and then proceed to ascertain for themselves the plants that will take the strongest kind, they will not have so many failures.

Mr Burbidge: In connection with what Mr James has said as to cutting off the spikes of orchids, I have no doubt that must be of the greatest assistance to the plant. Twelve or fifteen years ago the finest plants in England were those in the collection of Mr E. Salt, at Ferniehurst. I never saw plants which grew so well, and all their growth was owing to the spikes being cut off. Mr Salt had a delicate wife who could not go into the orchid house, and the consequence was that Mr Salt cut the spikes at once, even before

the last flower on the spikes had expanded; and I believe that it was owing to that that they were the finest specimens I ever saw. The question of manure for orchids is a very delicate question. Mr James tells us we must not use the manure too strong. I think the best point in Mr Borwick's paper was, when he told us to use the manure on our common plants. I am very anxious to put the point in this way, because if young growers begin to use manure without having some proportion given to them, some absolutely exact data as to cases in which manure has been successfully used, they will simply be playing with fire. I am very anxious to put these points before the meeting, because I have seen plants so badly injured by an indiscriminate use of manure.

The point about the cutting off of a spike is a sound one. Many top exhibition growers will only allow a champion class plant to flower every second year.

Mr James: I contend that the flowers draw up their nutriment from the dew of the house in a very much larger measure than from anything in the peat; and I say again, that if the manure is not too strong it is beneficial to the plant. I do not think for a moment that any young grower would be so stupid as to water any plant with liquid manure. There is just now springing up an idea that young men are the right men to conduct the affairs of the world, both in gardening and in everything else. Perhaps old men are not always wise, yet I do think that if young men do begin to water orchids with liquid manure they will do a very stupid thing. At any rate, I think it would be a wise method to practice first of all on those plants you care the least about in regard to value.

Mr Druitt: I simply wish to say that I consider the use of manures to be distinctly beneficial to terrestrial orchids.

Mr Heath (Cheltenham): The question of watering orchids with manure is a most difficult one, and one that will have to be argued out by practical people. There is no doubt that orchids are watered by a great many growers with manure, but they generally like to keep their secret to themselves. As regards orchid manuring we have not used it over the tops of the pots,but we have used on several occasions cow manure, sheep manure and horse manure, and we also tried the three together with a small addition of soot. We found the plants were very vigorous for a year or two, but after that we were bound to wash the entire plants out, for we found they got rather a yellow hue. Since that time we potted them, and instead of watering them overhead we have thrown down in the house manures, in the way of nitrate of soda and sulphate of ammonia, and after a week or so we found that the plants became of a most brilliant dark green colour. The only thing we find is, that all the different classes of dendrobia and cypripedia will take a large quantity of liquid manure of any sort; but tender roots do not take so large an amount of manure of the same kind. We have tried this plan now for six years.

The Chairman: Most of the remarks which gentlemen have made on this subject do not appear to have been upon the identical question which I introduced, that is, the direct application of this powder of fishbone, which is not treated with acid, as is usual with most manures. But this manure, I am informed, is absolutely free from all aciduous matter, and therefore it suggests itself to my mind as a perfectly novel manure; and although we are perfectly well acquainted with all the methods of getting atmospheric manures, still we are not so well acquainted with the direct application of this powder to the roots. It was for this reason that I introduced the question, and having introduced it and heard the various remarks that have been made, we will leave it.

Dr Masters: It appears to me from what has been said on this subject, that we have to deal with general principles. In the first place, we do not know the chemical composition of any part of the leaf or of the flower, and until we know that, we cannot have any definite rule as to the right manure to apply or when to apply it; but we may certainly say without any fear of contradiction, that all plants, orchids not excepted, want manure, and are the better for it, at a certain time. The thing to know is, what is the right food to give, and what is the proper time to give it. The proper food to be given them at one time is that which will make bulb and leaf, and which at another time will enable them to form flower and seed. Now, as to the structure of orchids, I may perhaps be more at home. The structure is extraordinarily diversified. The internal structure of leaves, flowers and roots, even in the same genus, is widely different, but I cannot believe that the appropriate food must be equally different. That we have got to find out in the future. More especially I would call attention to the roots of these flowers. There is nothing in nature like the root of an orchid. Instead of turning down into water like most other roots, the orchid root almost invariably turns up from it; therefore, if you dip these roots into liquid manure, I think you will be quite certain to injure them, as they undoubtedly absorb most of their food through atmospheric agency.

Mr Borwick: I would not use the ordinary bone manure, because it is so hard by nature that acid is required to make it mix with the ground. But the manure of which I have spoken mixes easily

with the ground without any acid at all.

Mr James: Are we to understand that this orchid conference will continue yearly? If so, I may suggest that on a future occasion we might exhibit plants that have been put to the various processes mentioned. In following up what Dr Masters has said, I think it is proved to demontration that the whole nutriment is taken in by the plant in the way he has suggested. It seems to me that everything points in the direction that the whole of the nutriment which the plant draws in, whatever it is, is taken through the air, upon which the plant subsists. Should we continue this meeting at a future time, I think it would be worthwhile for any members who may have special subjects to bring before the meeting to treat them in their own way.

The part played by absorption of carbon dioxide from the air by a plant was not understood in 1885.

The Chairman, after a hearty vote of thanks had been awarded to Mr Borwick for his remarks on the question of manures, said: I cannot give any promise that this meeting will be continued, because we have hardly got so far as that. When we first took up this idea of an orchid conference, we did so with considerable trepidation, because we had not only to consider the time of the year when people would be in London, but also the season when plants could be moved without being injured. Of course, if we want to have the best possible show, we ought to have it very much earlier; but then we have to consider about people being in London, and the question of visitors and other matters connected with it. It must be remembered that this conference brings no grist to the mill of the Horticultural Society in any way. We do not take any money at the door, but it is all done out of the pure love of orchid growing. (Hear, hear). I should say, speaking my own mind and feeling on the subject, that this orchid conference should continue. It has, I think, been a great success, everybody seems to have been exceedingly well pleased and satisfied, and I must say a great deal more interest has been taken in the subject than I ever expected to see. I was especially glad to see so many gentlemen come back after the adjournment for lunch. It now only remains for me to thank you all for your very kind attendance and for the very patient way in which you have listened to the remarks that have been made. (Hear, hear).

A century later we have a little more scientific knowledge on plant nutrients, but the above shows how much our forebears were able to achieve by trial and error. Even today we can learn from their experience.

Fifth ASEAN Orchid Congress

The 5th ASEAN (Association of South East Asia Nations) Orchid Congress was held in Singapore during August 1984. It included a magnificent orchid show staged in the World Trade Center, covering an entire floor and divided into several sections. One section was devoted to non-competitive exhibits including orchid displays by the Jurong Bird Park, the Singapore Zoo, the Orchid Society of South East Asia (OSSEA) and other organisations. A second section contained exhibits by the ASEAN countries (Indonesia, Malaysia, Philippines, Singapore and Thailand) while the third was devoted to plants and flower arrangements.

The quality of displays and flowers was very high as evidenced by the large number of gold, silver and bronze medals awarded to growers. These awards included first to (1) Mr Mak Chin On for his *Mokara* Mak Chin On (in addition to the awarded plant, many plants of *Mokara* Mak Chin On were provided by Mr Mak for several of the large display exhibits), (2) to Michael Ooi for *Phalaenopsis violacea*, (3) Mr S.Y. Alsagoff for *Bokchoonara* Khaw Biau Huat, *Renanstylis* Azimah and *Encyclia atropurpurata* var. *alba*, (4) Nonita Dolera for *Dendrobium dearei*, (5) Singapore Botanic Garden for *Paphiopedilum barbatum*, (6) Multi Orchids Pte for a collection of *Aranda* and/or *Aranthera*, (5) Genting Orchids for a collection of *Dendrobium* and others.

"Best" awards were given to Indonesia for a display of cut flowers, Malaysia for most elegant presentation of species, Thailand for a dendrobium display, and Singapore for an artistic and original exhibit.

In addition to the show, the congress included an orchid symposium at which experts covered aspects of research, cultivation, marketing, diseases, ecology and conservation.

The opening session included an address of welcome from Professor A.N. Rao and a comprehensive entertaining introductory lecture on "Why Orchids" by Dr J. Arditti. The many topics covered at the symposium ranged from mycorrhiza (Dr G. Hadley, University of Aberdeen), through orchid ethnobotany (L.J. Lawler, University of Sydney), *Paphiopedilum javanicum* (Dr Soetomo, Indonesia), carbon fixation (P.N. Avadhani, National University of Singapore), breeding (Mrs Ng Huang Gieh, Singapore), quarantine (K.G. Singh, ASEAN Plant Quarantine Centre), post-harvest technology (Dr Helen Nair, University of Malaya), marketing in Europe (Norbert Haas, Germany), Javanese orchids (James Comber, Indonesia and Thailand), orchid diseases (Kulchawee Kamjaipai, Thailand), orchids of Sabah (Tony Lamb and Andrew Bacon, Sabah, Malaysia), orchids of New Zealand (Ella Campbell, New Zealand), embryology (Dr H. Valmayor, University of the Philippines), resupination (J. Arditti and L. Nyman, University of California and N. Soedino, Flora Sari Orchids, Indonesia), to orchid alkaloids and their uses (L.J. Lawler, Australia), and others.

Dr Kiat Tan, Professor A.N. Rao, Mr Mak Chin On, Dr Teoh Eng Soon, Mr S.Y. Alsagoff, Mr Ang Gek Choo, and many other people helped make the Fifth Orchid Congress a great success. OSSEA was a gracious host and invited all participants to a magnificent dinner.

L.J. Lawler, G. Hadley and J. Arditti of the Universities of Sydney, Aberdeen and California.

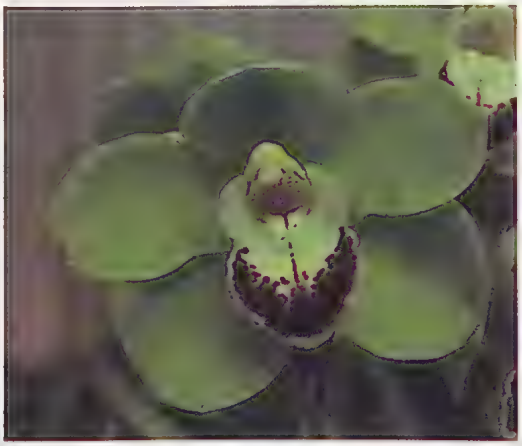
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Registrants praise 9th Australian Orchid Conference

R.W. Hodgins — Chairman, Steering Committee

After two years of planning by the Steering Committee it is gratifying that the six days of the conference and show was such an overwhelming success.

We have chosen to ask a few distinguished visitors of their views rather than write what may appear a biased report. To them and all associated with the conference, particularly to each of the Victorian affiliated societies who acted as host to a visiting State, may I, on behalf of the Victorian Orchid Club extend my sincere appreciation.

John Bisset — New South Wales

As a visitor to many orchid conferences over 40 years I would like to congratulate the Victorian Orchid Club on the great success of the Ninth Australian Orchid Conference.

The social activities were excellent, the lectures were instructive and interesting, on so many different aspects of orchid culture, and the general atmosphere of good fellowship was maintained throughout the conference.

The orchid show was the best massed-display of orchids I have seen since the orchid shows that were held in the Sydney Town Hall nearly 20 years ago.

The cymbidiums were excellent, but I was amazed at the magnificent variety of miscellaneous orchids and species not seen for years.

Congratulations on a wonderful show, and a credit to everyone who gave their plants, time and labour to make such a wonderful conference a complete success.

Chas F. Hill — Queensland

The Ninth Australian Orchid Conference is now history, but like great events in history will not be forgotten. The committee of the conference left no stone unturned in its effort to stage an excellent show and conference, and to provide everything for a friendly and informative event, they even made arrangements for good weather.

The show, staged at the Kew Civic Centre, was well laid out with plenty of space for people to walk around and enjoy the vast amount of flowers, well displayed from all States plus their own members. It was interesting to people from the north to see many of our cool-growing orchids on display. The odontoglossum and its various allied genera were very well represented, together with pleione and masdevallia. The whole show was tastefully laid out, with good use being made of the two stages, one at each end of the hall, and still left room for tables and chairs for a cup of tea to be enjoyed whilst resting and looking at the show as a whole.

The lecture programme was well balanced and covered a wide range of subjects, it was well presented in an excellent venue and was well patronised, the room was full most of the time.

The organised social events, once again were well received. The night out at Olinda after a pleasant coach trip up from the city was enjoyed by all, maybe a few stiff joints next morning, but that was their own fault.

The banquet at the Southern Cross Hotel was also well supported and was a great success, the parading of the roasts prior to serving the main course was both novel and delightful.

Tours, both official and un-official, were varied and covered many of the beauty spots of Victoria plus orchid establishments wild orchids.

Floral art lectures and demonstrations were well attended and were very successful, and judging by the end results I would think they would have been very informative as well.

On the whole the conference was a hectic and very enjoyable six days.

Frank Slattery — New South Wales

Having been invited to chair a session at the conference and my wife, Jean to join a group of demonstrators at the floral art session, we joined a large group of registrants to view a very wonderful show and enjoy the speeches at the conference sessions.

The show was beautifully arranged and one was treated to a vast expanse, in a continuous display of first-class orchids of all genera. I was particularly impressed with the display of paphiopedilum species exhibited by the Species Society and displayed on the stage. It was one of the best displays ever of this genus. Gerald McCraith's group of odontoglossum alliance created considerable attention and showed the popularity of this alliance. The interstate displays from all over Australia were well arranged and I am sure the organisers of the show must have been happy with the support from these societies.

The conference sessions at the Southern Cross were well attended and I think it would be the first time ever that the attendance never slacked the whole of the day. The variety of subjects presented by the speakers were all interesting and informative and the copy of the papers presented will be treasured by many people.

The demonstration by the group ladies, with an able compere proved very successful and there were nearly as many men as women present. This session was a new innovation at an Australian Conference and proved very successful.

The final night, of course, was the banquet and

what a pleasure it was to sit and be served instead of joining the queues for something to eat. Our congratulations to Victoria on a successful show and conference. It is wonderful to meet old friends and enjoy their company if only for a short time, and this to me is one of the highlights of a conference.

Ian Duncan — Western Australia

Members from Western Australia that attended the Ninth Australian Conference in Melbourne would like to congratulate the Victorian Orchid Club for organising and conducting a very friendly conference.

First there was the show held at the Kew Civic Centre which is a large hall with a stage at each end and it was virtually filled with plants in flower as well as cut flowers from interstate and overseas.

The lectures were held at the Southern Cross Hotel in pleasant surroundings. Those that attended listened intently to lectures that covered a wide range of topics concerning orchids. A big thanks to those that gave of their time and knowledge.

Then there was the fun night at the Cuckoo. This was enjoyed by all, even those from one State that travelled in the mini-bus and were sure that the driver had lost his way. We now have at least one grower in Western Australia that serenades her orchids with cow bells.

The banquet maintained the high standard. The food was excellent and the band just added the final touch that made it a very enjoyable night.

Probably the most outstanding aspect of the whole conference was the friendliness displayed by all.

Chris Nicholas — Tasmania

Isn't it a pleasure to attend an event which runs as you hoped it would and, most importantly, the various venues are readily accessible by public transport. That sums up the Ninth Australian Orchid Conference for me.

The show was quite a delight and certainly a suitable background for the staging of the cocktail party.

Attendance at the lecture papers, even after a night at the Cuckoo was an indication that the choice of material was good. The topics covered a broad spectrum and all were couched at a level to appeal to the average orchid grower.

The annual meeting of the AOC flowed smoothly and considerable business was achieved. The degree of consensus apparent between State delegates was good to see and certainly aided proceedings.

Undoubtedly the coup de grace of the whole happening was the banquet; the atmosphere was bright and friendly, the meal demonstrated the Southern Cross' ability in this area and a good time would have been had by all.

Congratulations Victoria for a job well done.

John Harris — South Australia

South Australians that participated in the conference and show had a most enjoyable and successful time in Melbourne. Our congratulations go to the organising committee and the Victorian Orchid Club. It was a busy week of activity that kept us going all hours, renewing old friendships and making new ones. The tradition of Australian Orchid Conferences has been maintained and we sincerely hope that we, the Orchid Club of South Australia can continue that tradition in 1986.

The Spirit Collection at Kew

Gwen Lee is Spirit Collection Curator at Kew Gardens. Because this is the greatest collection of plants and their flowers preserved in spirit in the world, and two-thirds of them are orchids, information provided by Ms Lee on this collection is particularly interesting.

The collection was started in the 1930's by V.S. Summerhayes. By 1936 some 258 genera of orchids were represented. The collection is situated in the basement of the herbarium's D wing. It now contains over 46,500 documented specimens, of which over 30,000 are orchids representing 598 genera.

The preserving liquid used at Kew consists of a mixture of 53 per cent industrial spirit (97 per cent ethanol), 37 per cent distilled water, five per cent glycerol and five per cent formaldehyde solution (four per cent HCHO).

Glycerol stops the flowers becoming brittle and formaldehyde prevents bacterial decomposition. The spirit level is checked at six-monthly intervals and should evaporation have occurred the remaining spirit is replaced completely with fresh liquid.

The advantages of studying flowers preserved in spirit as opposed to pressed material are many. Orchid flowers do not press well and often some degree of decomposition accompanies the drying process. Reconstitution is time consuming and the resurrected material often requires interpretation as it seldom recovers to its original shape. Most spirit specimens in the Kew collection do indeed correspond to live specimens. In addition to the information that can be provided for taxonomic work the spirit collection is a fertile source of material for other work such as developmental and anatomical studies.

Only one proviso applies to its use by botanists: if a specimen is dissected then it must also be drawn and a copy of the drawing filed in the herbarium.

Around the Shows

Ninth Australian Conference Show

GWEN SMITH

Our first real impression of the show was the faultless lighting. I doubt if there was a shadow cast on anything! The next impact was a wall-to-wall mass of colour. Then, of course, individual orchids began to assert themselves. For me, surely one of the best exhibits was a huge specimen plant of *Odontoglossum pulchellum*, with many spikes of waxy white blooms, too numerous to count. This attracted a Culture Certificate from the judges later. While on the species, mention must be made of a *Lycaste virginalis* 'Alba', which displayed two perfect white flowers, and was awarded a Highly-Commended Certificate.

For the cymbidium lovers, here are a few names for the little black book. Two glowing brown spikes caught the judges' attention, these being standard *Cyms.* Chocolada 'Mocha' (Zumma Boyd x Hamsey) and Rangitara 'Brown Eyes' (Volcano x Babylon), with the latter receiving an Award of Distinction. These are two crosses to seek out if possible. *Cym.* Alison Shaw 'Valentine' displayed two tall pink spikes, and won a well-deserved HCC for Mt Beenak Nurseries. Bob Hodgin's stand was resplendent with various clones of *Cym.* Jubilation, with the following three taking out first, second and third placings in the yellow class — 'Geronimo', 'Eureka' and 'Good As Gold'. Bob showed the Grand Champion *Odm.* 'Ararat' which also received an HCC.

Another beautiful cymbidium was (Paracel x Wyanga) x Sleeping Beauty 'Jenny Wren'. This was a pure-colour luminous bright yellow owned by Dr J. Coker, for whom it received an AD. The best red I have ever seen was *Cym.* Sensation 'Purple Perfection', and the name says it all.

Two stands stood out a little above the rest, and believe me, that was hard to do. Firstly the stand of the Orchid Species Society of Victoria was the centre of attraction for the *Paph.* lover. Wayne Turville's collection of species *Paphs.* was an incredible sight, including such gems as *P. esquirolei, haynaldianum, chamberlainianum,* and many more. Graeme Carr's *Eriopsis biloba* was an outstanding plant, as was his *Coelogne mooreana.* Many more unusual genera were represented. Space does not allow them all a mention.

The other stand was that of Mt Beenak nurseries, which was controversial in that the pots were all uncovered, and displayed on tall pot plant stands, with the miniatures and intermediate spikes cascading down, and every individual spike clearly visible. Personally, I found this very attractive, as the plants could be viewed all around, giving the exhibit a lovely airy-fairy look, uncluttered with foliage plants etc, with nothing to distract the eye from those myriad arching-spikes of perfection. This display won its class.

Australian Natives were well to the fore, with Kevin McFarlane's *Cym. canaliculatum* 'Alba' taking pride of place — truly an exquisite form.

VOC Spring Festival

Following the Ninth Conference the VOC held its Orchid Festival at the Parkmore/Keysborough Shopping Centre. This ran from October 8 to 20 and proved a real crowd-pleaser.

The Grand Champion was Bob Hodgin's *Cym.* Jubilation 'Geronimo', with intense-yellow flowers and red labellum, each one large and perfectly proportioned. It received the top Award of First Class Certificate and has undoubtedly set a new standard for the genus.

ANOS Victorian Group

Clever landscaping produced a waterfall, pond and fountain background for the epiphytes at the ANOS Victorian Group Spring Show held at the Victorian National Herbarium. The landscaping was a new departure over previous years and caused much favourable comment.

Well-known terrestrials have always been a feature of this show and this year they were better than ever. More and more members are learning their needs.

As in previous years door donations resulted in a substantial sum for the Kim Cancer Fund.

Judging was on a cultural basis. Prize for the Phil Mims award for Best Cultivated Terrestrial went to *Caladenia latifolia* owned by Malcolm Thomas. A proud achievement for Malcolm because the competition was fierce. The Bill Murdoch award for Best Cultivated Epiphytic went to a splendid *Dendrobium striolatum* grown by Alison and Leon Irwin. Award for the Best Cultivated Epiphytic Hybrid was gained by a *Dendrobium* Bardo Rose belonging to Olive and Ken Killian.

Melbourne Eastern OS

The MEOS Spring Show was truly a "World of Orchids". The Mechanics Institute Hall in Oakleigh proved a most suitable venture for displaying orchids to wonderful effect.

Grand Champion just had to be one of the finest cymbidiums flowered in years: Bob Hodgins *C.* Jubilation 'Geronimo' which had been awarded a FCC at the Conference Spring Show. The last First Class Certificate awarded to a cymbidium was thirty years ago. At the moment this is a VOC award and has yet to be confirmed on the national level. Congratulations Bob.

The champion had rich golden-yellow segments with red-flushed lips. Bob also scored with a shapely chocolate-red seedling, the dark lip edged in white. The cross was *C.* Kyber Pass x *C.* Sensation 'Chianti'.

Master grower Stan Rowlands won Reserve Champion

with his *Cymbidium* Highland Mist 'Kersbrook', a cuppy white beauty with a pink-flushed lip.

Best Specimen went to the miniature *Cymbidium* Katydid 'Glandor', a mass of clear-green flowers, each with a spotted yellow lip.

Cymbidium species *C. lowianum* and *C. grandiflorum* attracted a great deal of attention. Species are coming into their own again.

Arthur Knight benched *Miltonia* Eros, a very large velvet-red bloom which won its class. D. and V. McLaine had a triumph in the Best Specimen Novice class with their cross *Cymbidium pumilum* var. *album* x *C.* Wallara 'Gold Nugget'.

There were over forty classes and prizes were well distributed among members.

Mornington Peninsula Spring Show

Champion Orchid was *Oncidium* Sydney, a spectacular orchid shown by D. and S. Early. Reserve Champion was also a dramatic specimen, and an Aussie at that, none other than *Sarcochilus hartmannii* owned by A. and R. Rentoul. Large Display Trophy went to H. and M. Foster Johnson, and they also won the MPOS Trophy with *Den.* Yukidaruma 'The King'. The team demonstrated their skill by also winning the Specimen Trophy with *Den. pierardii.*

The Timson Trophy for three cymbidiums of distinct colours was won by T. and B. Avery. A trophy for small displays went to the team of R. and D. and L. and J. Smith.

Cymbidium classes were very strong, making up the major part of the show. Champion was *C.* Orkney 'Pink Heather' owned by D. Dawes. Reserve Champion *Cymbidium* Valley Conquest 'Majestic' was benched by M. and G. Podolski.

Best Seedling Cymbidium, and one to keep your eye on, was Ern Kettle's *C.* Fuss.

QOS Anniversary Show

The Queensland Orchid Society held its colourful Anniversary Spring Show in the auditorium of the Kelvin Grove High School. Stewie Heyden tabled the Champion, *Phalaenopsis* Danse, a large evenly-coloured pink with good spike habit. Stewie's *Phal.* Antarctic 'Blancherine', a classy white, was Reserve Champion.

Champion "Golden Tones" award went to the dainty intermediate *C.* Nonna 'Golden Glades' tabled by Alan and Joyce Ryan. This special Golden Award was made to further highlight the Golden Jubilee. Alan and Joyce also tabled the natural intergeneric hybrid *Bc.* Lindleya 'Joyce', CC/QOS, which they certainly know how to flower as it was judged Best Specimen. This same plant was much admired at the Brisbane Conference Show in 1982. Champion Cymbidium also went to the Ryans with their fine green *C.* Dr Lloyd Hawkinson 'Piedmont'.

Perhaps the best *Dendrobium canaliculatum* seen around Brisbane Town won the Champion Specimen Native. M. and F. Wheeler tabled this beauty which excelled in floriferousness, spike habit and overall charm.

The prestigious AOC Award for Most Pre-Eminent Entry went to a fine display of *Sarcochilus falcatus.* Enterprising R. Robinson had about twenty of these plants on a two-metre slab of bark.

Pine Rivers OS topped the Affiliated Societies with an artistically-arranged display full of very desirable orchids. They included the softcanes *D.* Golden Blossom 'Kogane', *D.* Utopia 'Lustre' and *D.* Akatuke 'King'. The latter was an eye-catcher with its large, flat, medium mauve colour blooms. *Epilaeliocattleya* (*Epi.* Ruth Bechenback x *Lc.* Randy) bore rather "odd-bod" blooms with *Epi. atropurpureum* lips and velvety segments. *Brassia gireoudiana* from Costa Rica added that exotic touch to this fine display.

"Colour My World" was the theme chosen and so well interpreted by second-placed West Brisbane OS. This classy display carried many fine phalaenopsis, cattleyas and dendrobes. As I looked at *Cymbidium lowianum* from Burma I could not help harking back to the days before the "orchid explosion" when very few hybrids were about and species held pride of place. *Phal.* Golden Louis took my eye on this display, rich golden blooms on a long upright stem.

A desirable *Cym.* Sensation 'Aminya' of very dark-red hue graced North Albert OS stand. The society chose "Family Harmony" for its theme, and certainly accomplished it with such props as a goldfish in a pond, and a bird bath with white doves (not the feathered kind). A fine white and splashed red *Phal.* (Frances Roberts x Lipperose) and a classy, predominantly orange, *Paph.* Julie Marsh 'Fairfield' were just two of the good ones in this display.

A specimen-size pure-white *Den.* Sagimusume, and the bluest blue *Vanda* Judy Miyamoto 'Blue Velvet' were two of the beauties which stood out in the Aspley OS display. *Oncidium maculatum* from Mexico and many fine forms of *Phal.* Sarah Frances Pridgeon graced this well-arranged display.

The Native Orchid Society, as always, showed many fine "dinkum Aussies". *Cymbidium canaliculatum* fma. *sparkesii* was represented with many desirable forms of this black — well, almost — native. Its velvety dark blooms on long strong stems never fail to please. In contrast many of the common brown-green forms complemented them. A large *Den. beckleri* mounted on cork bark and a huge *D. teretifolium* were two more husky natives.

A fine form of *Cym.* Burgundian 'Bexley' with many pink-veined blooms on four strong spikes dominated the North Brisbane OS display. It quite dwarfed a beautiful little equitant *Oncidium* Potpourri, and another little gem *Den.* Ise x *D. moniliforme.* The latter, only 15 cm tall with flowers of white and orange deep down in the lip.

Frank Oelkers.

Redcliffe District Orchid Society

Sunny Queensland turned on beautiful warm spring weather in early September for the Spring Show at Kern Shopping Centre. A gentle breeze through the high fibreglass roof of the plaza kept the plants in good condition for the three days of the show.

Bill and Esther Rankin were owners of Champion *Lc.* Drumbeat 'Triumph' — the superb bloom well deserved the accolade.

Reserve Champion, the floriferous *Dendrobium* Yukidaruma 'King' was judged 'Most Pre-eminent Entry'. It was exhibited by Ken and Nola Parnell who also received the QOS Medallion for a magnificent specimen plant of *Ludisia discolor.*

A *Dendrobium nobile* with more than a dozen flowering canes, owned by Mr and Mrs Bill Smillie, was Champion Specimen. Mr and Mrs K. Hatcher's fine *Oncidium splendidum* was Champion Species.

For the second year in succession Champion Native went to Ken and Myrtle Smith's crystalline white-flowered *Dendrobium delicatum.*

Blc. Jane Paton 'Rene' was Best White Cattleya, owned by the Spencer family. Best of the cluster cattleyas was the brilliant orange *Lc.* Burning Star.

Doug and Kath Wankawere collected blue ribbons for *Paphiopedilum* Novenka and *Cymbidium* Dr Lloyd Hawkinson 'Piedmont'. Novice Prize went to Alex Wrigley.

Aspley OS Show

The Aspley Orchid Society Spring Show was a most colourful event. Our venue was a picture with beautiful displays and a host of tabled blooms.

The Champion Orchid of the Show, *Cym.* Pearl Balkis 'Cooksbridge' was shown by J. and L. Heath. The Reserve Champion was *Cattleya* Esbetts x *C.* Ruth Johnson and was displayed by D. Watson.

A. and R. Bailey won the Champion Species with *Den. nobile* and the magnificent display of *Den. speciosum* won Champion Native for L. and J. Smith.

Ipswich Spring Show

The Ipswich OS adopted a new layout for this year's Spring Show which set off the orchids very effectively. Grand Champion is recorded as *Odont.* Ron Buckman owned by Mr D. Dorr. However, there does not appear to be a plant registered with this name. There is an *Odontioda* Ray Buckman registered by Dugger in 1972 from a crossing by Charlesworth. Reserve Champion was the lovely white *Cattleya* Ave Maria 'Angelica' benched by E. and L. Webb.

Golden Anniversary Show

The Orchid Society of NSW celebrated fifty golden years with a superb spring show at Roselands Shopping Centre. Every society and individual exhibitor set out to make it the best show in the society's history, consequently quantity and quality of flowers were outstanding.

A species orchid won the Grand Championship: *Phalaenopsis schilleriana,* a glorious mass of rose-pink flowers, owned by Bob Zeller. It was Bob's day because he also won Champion Native with a plant of his own crossing, *Dendrobium dicuphum* x *fleckeri.* This was only a small plant but the flowers were far superior to either parent.

Reserve Champion was the very shapely, dazzling white *Phalaenopsis* Alice Gloria skilfully grown by Mr and Mrs John Gulbis.

Mr J. Mata is famed for his growing of cymbidiums, therefore it was not surprising to see his *C.* Narela 'Jennifer Gail' as champion. Champion Cattleya went to Mr Bob Montgomery's *Blc.* Drumbeat 'Heritage'.

Competition for top paphiopedilum is always strong in NSW, and consistent winner Stan Condon, triumphed with *P.* Cinnabar 'Sonora'.

Mr and Mrs Gulbis wrapped up Champion Any Other Genus with their delightful *Ascocenda* Kohman 'Red Satin'.

In the large affiliated society displays Parramatta narrowly beat North Shore, no doubt having the edge on cymbidiums. Both these societies have battled for first place year after year. Eastwood was third. Bankstown over the last few years has improved its placing and in the future seems bound to do better than fourth. Sutherland has been consistently high in the placings and this time came fifth. Then followed Cumberland, Sydney, Berowra, Eastern Suburbs and St George. All of these displays were crowd-stoppers.

Attractive small displays were set up by Five Dock, Kuring-gai, Orchid SPECIES and Hawkesbury, all from the metropolitan area. It was good to see three splendid country entries, each of which deserved the win in their respective classes. They were Blue Mountains and District, Corrimal and Gosford.

In the small displays by individuals first prize went to the partnership of Vic Madden and Irene Bodell, second to the Chalmers family and third to York Meredith.

Tabletop displays were tastefully-arranged mounds of quality orchids, the first prize going to Gordon Hansen, second to Vic Madden and third to R. Mitchell.

There were six entries in the large native displays, a feature being the many large specimen plants of hybrids. These were set up on a lower level of the Roselands complex. Panania-East Hills came first, with North Shore second, then ANOS, Cumberland, Sydney and Kuring-gai. There were two nice native tabletops, the prizes going to G. Brandon and W. and J. Upton. D. and G. Hogan won in classes for three native species and three native hybrids.

There were so many fine plants that even picking out a few is a subjective judgment. In the intermediate cymbidiums there was a nicely-grown plant of *C.* Crackerjack 'Brown Velvet' shown by N. Goudie. *C.* Excalibar 'Galahad' is a minicym cross registered twenty-one years ago (Sweetheart x Dryad) yet it is still the one to beat. Mr and Mrs Ern Pauley flowered it to perfection. A seedling to watch is Mr Dave Wallace's *C.* Sweet Spring x Dag. Many old-established clones showed that when well flowered they are hard to beat. Among these were *C.* Sensation 'Purple Perfection' (A. Duffy), *C.* Wallara 'Gold Nugget' (N. Johnson) and the colourful *C.* Burgundian 'Chateau' (Ron Lin).

Two impressive yellow-flowered plants of *Phalaenopsis* Golden Barbara earned first and second places for G. Cox and the team of V. Madden and I. Bodell.

That soft golden-flowered clone *Blc.* Malworth 'Orchidglade' once again proved it is the supreme yellow by winning first and second prizes for D. Bloomfield and the Chalmers family.

The striking-red *Renanthera* Brookie Chandler is a truly dramatic orchid when well flowered, as it was by K. and J. Blackman.

Well-flowered nobile types are a delight and great credit is due to Mrs I. Hartmann for her *Dendrobium* Yukidaruma 'King', an unblemished white of renown.

There were some magnificent *Dendrobium speciosum* clones and two exceptional yellow plants won first and second prizes for W. Platt. A huge well-flowered *Dendrobium delicatum* dominated the Berowra display. It was judged Best Specimen Australian Native and earned a Cultural Certificate for Mr Ted Gogerley.

Cumberland Orchid Circle

That lovely pink *Cymbidium* Narela 'Jennifer Gail' was Grand Champion. Owner W. Temple. Reserve Champion was Fred Alcorn's *Cymbidium* Cleo's Melody 'Eldorado'. President Sid Batchelor's *Dendrobium kingianum* 'Betty' was Champion Native and his *D.* Star of Gold 'Burns Creek' the Champion Native Hybrid.

Best minicym was *C.* Mimi 'Midsen' shown by Mr and Mrs Jeff Allen. Best novice entry was *D. delicatum* 'Kimish' belonging to Mr B. Fletcher.

The show was held in the Castle Hill Mall.

Tamworth Spring Show

This year the Tamworth Orchid Society moved to the K-Mart Shopping Centre where the well laid-out display attracted a great deal of attention.

The Grand Champion exhibitor was Mrs Merle Sutton who also won five other prizes. Mr Max Tom was the most successful exhibitor.

Tamworth's tableland climate presents problems for local growers but the effectiveness of this year's show presentation indicates they have learnt to cope with them. The society has gained some keen new members in the past year.

Whyalla Orchid Club

Both winter and spring shows were enjoyed by the shoppers at Westlands Mall. Champion at the winter show was fine green intermediate *Cymbidium* Wakakusa 'Bankstown Show' belonging to Whyalla Orchids. Reserve went to *C.* Lunagrad 'Elanora' (4N) which is a superb green in its tetraploid form. It was grown by Mr and Mrs Dean Butson. Dendrobium Champion was a well-shaped hardcane *D.* Maverick 'Ivy' (Ale Ale Kai x Hickam Deb) belonging to Mr and Mrs John Marsh.

Merv Green came from Adelaide to do the judging.

Les Nesbitt and associate judge Ted Chance officiated at the spring show. Whyalla is most grateful to these gentlemen for their excellent work.

The Spring Grand Champion was *Cymbidium* Highland Mist 'Barita' shown by Whyalla Orchids. Dean Butson owned the Reserve Champion, *C.* Highland Mist 'Lalchere'. An intermediate *C.* Bob Norton 'Edna May' was ranked third. It belonged to Bruce Higgins. Champion Native was *Dendrobium speciosum* shown by Mrs Walters. Jack Sims' pink *C.* Narella 'Jennifer Gail' won its class. Most other cymbidium classes went to Whyalla Orchids. Among these were some fine intermediate cymbidiums including the red *C.* Ivy Fung 'Radiance', the yellow *C.* Sylvia Miller 'Peachy Keen', and the white *C.* Showgirl 'Marion Miller'. They also won Best Specimen Intermediate with *C.* Lynette 'Balin'.

An interesting seedling from the cross *Paphiopedilum* Winston Churchill x *P.* Paeony, was winner in the first division for John Marsh. Best seedling in the second division was *Phalaenopsis* Mundulla 'Delight' x *P.* Elinor 'Shaffer Camden' owned by Peter Galpin.

Gawler Districts Orchid Club

This South Australian society Spring Show had *Den. speciosum* as Champion. Reserve was *Cym.* Kerta 'Pink Showers'. Champion First Division was *Cym.* Clarisse Carlton 'Pink Delight'.

A Symphony at Mt Gambier

The Mt Gambier Orchid Society played their Spring Show on the theme: *A Symphony of Orchids.* The harmonic atmosphere was conveyed by a backdrop of musical instruments, with the orchids providing the counterpoint. Adelaide judge, Mr G. Eakins, piped a melodious note when he praised the quality of the flowers and general standard of the show.

Grand Champion was the intermediate *Cym.* Ivy Fung 'Sultan', owned by Mrs P. Waugh. Mr A. Tooth's fine pink *Cym.* Hubert Cambourne 'Lois' was Reserve Champion.

Mrs M. Varcoe and Miss M. Franklin combined their plants to create the prize-winning exhibit.

There was a nice display of cymbidiums, prize winners being Mrs P. Waugh and Messrs J. Shaughnessy, and A. Burdon.

Best Paphiopedilum was Mr A. Gill's *P.* Veriliteria x Winston Churchill. Best Species was *Paph. venustum* 'Pardinum', owned by Mr J. Shaughnessy with Miss M. Franklin as exhibitor of the Best Native, *Den. falcorostrum.*

Port Augusta Spring

Port Augusta Orchid Club and the Port Augusta Garden Club combined resources to create a very attractive Spring Show.

Grand Champion was apple-green *Cym.* Joyce Duncan 'Hot Lips'. It showed the careful culture of Dean Butson who also had the Reserve Champion. The latter was a *Dendrobium speciosum* with three magnificent spikes of very large flowers. Best Seedling was *Paphiopedilum* Langley Pride x *P.* Paeony grown by Miss S. Sault.

Riverland Orchid Society

This society draws members from towns along the lower Murray River, with Renmark as the centre. Show Champion was *Cym.* Highland Mist 'Dillabirra'.

RARE LAELIA AT NORTH SHORE MEETING

Roy Nurthen, writing in the *NS Orchid Bulletin,* was very enthusiastic about the rare *Laelia fidelensis* benched at a meeting early this year. It had two beautiful, uniformly-pink flowers, each about 9 cm wide. The sepals were lanceolate, with the petals twice as wide and ovoid, narrowing abruptly at the tip. The tubular labellum was white over-shaded with yellow and faintly veined with mauve.

Roy pointed out that this rare *Laelia* is regarded as the missing link between the *Laelia* species of the Section Cattleyodes, containing species which resemble unifoliate cattleyas and include *L. tenebrosa* and *L. purpurata,* and the small-growing Hadrolaelia Section species such as *L. pumila* and *L. jongheana.*

It was first discovered in 1940 by Dr Jullo Sadre in the Sera da Sao Fidel, a mountain range in the Rio De Janeiro State. It was ratified as a species in 1967.

Grower Vic Madden said that after years of no flowers he induced it to bloom by taking it out of the glasshouse and growing it outdoors. Thanks Roy and Vic for this information.

QOS 1985 AUTUMN SHOW

Scheduled for April 12, 13 and 14, 1985 in the Mt Cootha Botanic Gardens Auditorium. A new format is planned.

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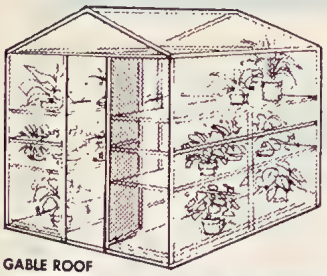
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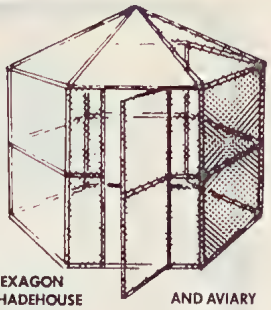
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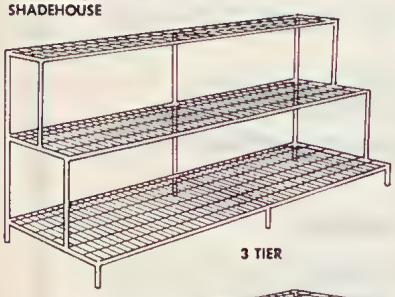
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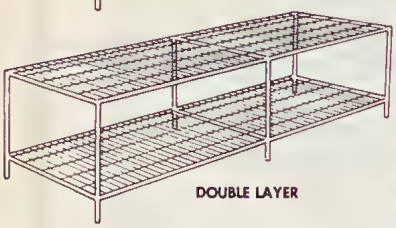
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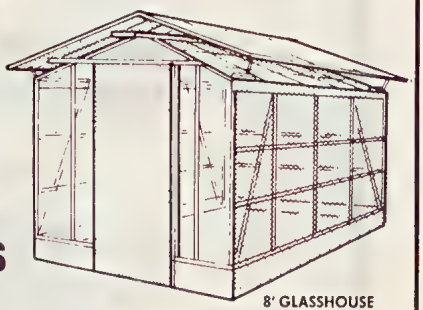
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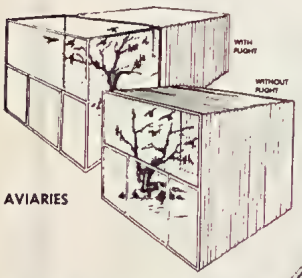
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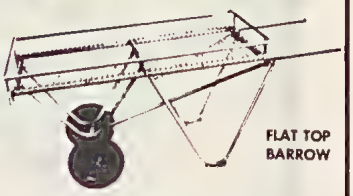

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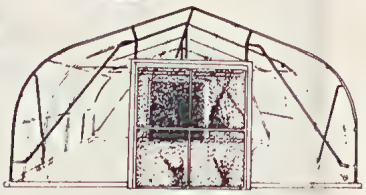
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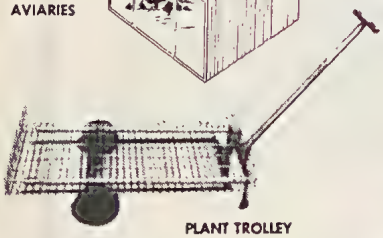
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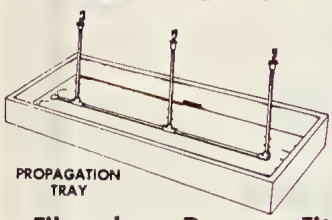
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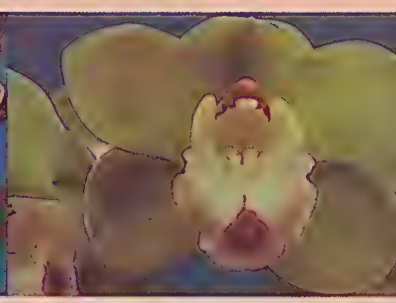
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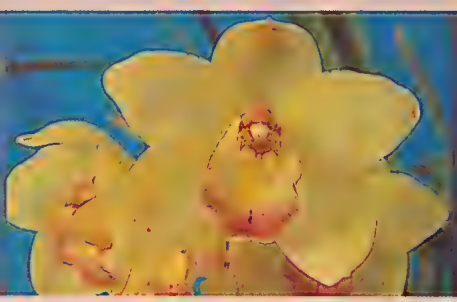
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AUSTRALIAN Orchid REVIEW

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COMPILED BY RONALD KERR
for the Publishers **GRAPHIC WORLD,** Sydney, Australia

Italics of both names indicate species orchids.

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